

ISSUE SUMMARY
Form SOP-0402-07, Revision 8

DESIGN CONTROL SUMMARY			
CLIENT:	PSEG Nuclear Development	UNIT NO.:	N/A
PROJECT NAME:	PSEG ESPA	PAGE NO.:	1 of 105
PROJECT NO.:	12380-001	S&L NUCLEAR QA PROGRAM	
CALC. NO.:	2009-11222	APPLICABLE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
TITLE:	ENVIRONMENTAL CONSEQUENCE ANALYSIS FOR PSEG ESPA		
EQUIPMENT NO.:			
IDENTIFICATION OF PAGES ADDED/REVISED/SUPERSEDED/VOIDED & REVIEW METHOD			
Revision 2 of the calculation replaces the proprietary data that was used as input in the MACCS2 models by the data obtained from the non-proprietary sources. The contents of Attachments A.1, A.3, and A.4 of the calculation are updated in this revision. Revision 2 of the calculation has a total of 2,785 pages. Changes to the pages due to this revision are identified with revision bars.		INPUTS/ ASSUMPTIONS	
REVIEW METHOD: Detailed Review		<input checked="" type="checkbox"/> VERIFIED	
STATUS: <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> SUPERSEDED BY CALCULATION NO. <input type="checkbox"/> VOID		<input type="checkbox"/> UNVERIFIED	
PREPARER:	M. Ascic/ <i>Mina b49</i>	REV.:	<u>2</u>
REVIEWER:	B. Schwartz/ <i>Barry Schwartz</i>	DATE FOR REV.:	<u>11-27-12</u>
APPROVER:	W. J. Johnson/ <i>WJ Johnson</i>	DATE:	<u>11-15-12</u>
		DATE:	<u>11-15-12</u>
		DATE:	<u>11-27-12</u>
		DATE:	<u>11-27-12</u>
IDENTIFICATION OF PAGES ADDED/REVISED/SUPERSEDED/VOIDED & REVIEW METHOD			
		INPUTS/ ASSUMPTIONS	
		<input type="checkbox"/> VERIFIED	
		<input type="checkbox"/> UNVERIFIED	
REVIEW METHOD:		REV.:	
STATUS:	<input type="checkbox"/> APPROVED <input type="checkbox"/> SUPERSEDED BY CALCULATION NO. <input type="checkbox"/> VOID	DATE FOR REV.:	
PREPARER:		DATE:	
REVIEWER:		DATE:	
APPROVER:		DATE:	
IDENTIFICATION OF PAGES ADDED/REVISED/SUPERSEDED/VOIDED & REVIEW METHOD			
		INPUTS/ ASSUMPTIONS	
		<input type="checkbox"/> VERIFIED	
		<input type="checkbox"/> UNVERIFIED	
REVIEW METHOD:		REV.:	
STATUS:	<input type="checkbox"/> APPROVED <input type="checkbox"/> SUPERSEDED BY CALCULATION NO. <input type="checkbox"/> VOID	DATE FOR REV.:	
PREPARER:		DATE:	
REVIEWER:		DATE:	
APPROVER:		DATE:	

NOTE: PRINT AND SIGN IN THE SIGNATURE AREAS

ISSUE SUMMARY
Form SOP-0402-07, Revision 7B

DESIGN CONTROL SUMMARY			
CLIENT:	PSEG Nuclear Development	UNIT NO.:	N/A Page No.: 2 of 105
PROJECT NAME:	PSEG ESPA		
PROJECT NO.:	12380-001	<input type="checkbox"/>	NUCLEAR SAFETY- RELATED
CALC. NO.:	2009-11222	<input checked="" type="checkbox"/>	NOT NUCLEAR SAFETY-RELATED
TITLE:	ENVIRONMENTAL CONSEQUENCE ANALYSIS FOR PSEG ESPA		
EQUIPMENT NO.:			

IDENTIFICATION OF PAGES ADDED/REVISED/SUPERSEDED/VOIDED & REVIEW METHOD			
Initial Issue (2785 pages): Calculation parts listed below, page quantity in parenthesis, ()			
Calculation (103) Attachment A.1 – ABWR MACCS2 Vendor Data (18) Attachment A.2 – AP1000 MACCS2 ATMOS File Data (12) Attachment A.3 – US-APWR MACCS2 Vendor Data (12) Attachment A.4 – U.S. EPR MACCS2 Vendor Data (10) Attachment B – WinMACCS Program Files (3) Attachment C – PSEG Site Met Data (173) Attachment D – PSEG Site File (5) Attachment E.1 – ATMOS Input File Data (ABWR) (20) Attachment E.2 – EARLY Input File Data (ALL) (13) Attachment E.3 – CHRONC Input File Data (ALL) (10)	Attachment E.4 – ATMOS Input File Data (ABWR, 4300 MWt) (20) Attachment F – ATMOS Input File Data (AP1000) (19) Attachment G – ATMOS Input File Data (US-APWR) (20) Attachment H – ATMOS Input File Data (U.S. EPR) (28) Attachment I.1 – MACCS2 Output File Data (ABWR, 4005 MWt) (373) Attachment I.2 – MACCS2 Output File Data (AP1000) (263) Attachment I.3 – MACCS2 Output File Data (US-ABWR) (265) Attachment I.4 – MACCS2 Output File Data (U.S. EPR) (801) Attachment I.5 – MACCS2 Output File Data (ABWR, 4300 MWt) (374) Attachment J – Hope Creek ER MACCS2 Input Files (243)		INPUTS/ ASSUMPTIONS <input checked="" type="checkbox"/> VERIFIED <input type="checkbox"/> UNVERIFIED
Note: this calculation contains proprietary information (design inputs and associated attachments).			
*Proprietary information has been removed in Revision 2 of the calculation.			

REVIEW METHOD: <u>Detailed Review</u>	REV. <u>0</u>
STATUS: <u>Approved</u>	DATE FOR REV.: <u>1/25/2010</u>
PREPARER <u>M. Ascic/</u> Signature on File	DATE: <u>1/25/2010</u>
REVIEWER <u>B. Schwartz/</u> Signature on File	DATE: <u>1/25/2010</u>
APPROVER <u>W. J. Johnson/</u> Signature on File	DATE: <u>1/25/2010</u>

IDENTIFICATION OF PAGES ADDED/REVISED/SUPERSEDED/VOIDED & REVIEW METHOD			
Assumption 3.1.1 has been expanded to clarify the source (Environmental Report from License Renewal Application) of the meteorological and site files used by MACCS2 computer program (Page 26). A reference for the environmental report has been added in Section 7 of the calculation (Page 104).			INPUTS/ ASSUMPTIONS <input checked="" type="checkbox"/> VERIFIED <input type="checkbox"/> UNVERIFIED
The cover sheet (Page 1) and the table of contents (Page 2) are also affected.			

REVIEW METHOD: <u>Detailed Review</u>	REV. <u>1</u>
STATUS: <u>Approved</u>	DATE FOR REV.: <u>5/5/2010</u>
PREPARER <u>M. Ascic/</u> Signature on File	DATE: <u>5/4/2010</u>
REVIEWER <u>B. Schwartz/</u> Signature on File	DATE: <u>5/4/2010</u>
APPROVER <u>W. J. Johnson/</u> Signature on File	DATE: <u>5/5/2010</u>

IDENTIFICATION OF PAGES ADDED/REVISED/SUPERSEDED/VOIDED & REVIEW METHOD			
			INPUTS/ ASSUMPTIONS <input type="checkbox"/> VERIFIED <input type="checkbox"/> UNVERIFIED
REVIEW METHOD: _____	REV. _____		
STATUS: _____	DATE FOR REV.: _____		
PREPARER _____	DATE: _____		
REVIEWER _____	DATE: _____		
APPROVER _____	DATE: _____		

NOTE: PRINT AND SIGN IN THE SIGNATURE AREAS



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	3	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

TABLE OF CONTENTS

Page

1 PURPOSE AND SCOPE5

2 DESIGN INPUTS8

2.1 GENERAL8

2.2 ATMOS Model11

2.3 EARLY Model23

2.4 CHRONC Model23

3 ASSUMPTIONS27

3.1 GENERAL27

3.2 ATMOS Model27

3.3 EARLY Model29

3.4 CHRONC Model29

4 METHODOLOGY AND ACCEPTANCE CRITERIA32

4.1 Methodology32

4.2 Acceptance Criteria33

5 CALCULATIONS34

5.1 MACCS2 Input Parameters34

6 RESULTS100

7 REFERENCES105



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	4	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

<u>ATTACHMENTS:</u>		<u>Pages</u>
ATTACHMENT A.1	: ABWR MACCS2 Vendor Data	A.1-1 to A.1-16
ATTACHMENT A.2	: AP1000 MACCS2 ATMOS File Data	A.2-1 to A.2-12
ATTACHMENT A.3	: US-APWR MACCS2 Vendor Data	A.3-1 to A.3-10
ATTACHMENT A.4	: U.S. EPR MACCS2 Vendor Data	A.4-1 to A.4-12
ATTACHMENT B	: WinMACCS Program Files	B-1 to B-3
ATTACHMENT C	: PSEG Site Met Data	C-1 to C-173
ATTACHMENT D	: PSEG Site File	D-1 to D-5
ATTACHMENT E.1	: ATMOS Input File Data (ABWR, 4005 MWt)	E.1-1 to E.1-20
ATTACHMENT E.2	: EARLY Input File Data (ALL)	E.2-1 to E.2-13
ATTACHMENT E.3	: CHRONC Input File Data (ALL)	E.3-1 to E.3-10
ATTACHMENT E.4	: ATMOS Input File Data (ABWR, 4300 MWt)	E.4-1 to E.4-20
ATTACHMENT F	: ATMOS Input File Data (AP1000)	F-1 to F-19
ATTACHMENT G	: ATMOS Input File Data (US-APWR)	G-1 to G-20
ATTACHMENT H	: ATMOS Input File Data (U.S. EPR)	H-1 to H-28
ATTACHMENT I.1	: MACCS2 Output File Data (ABWR, 4005 MWt)	I.1-1 to I.1-373
ATTACHMENT I.2	: MACCS2 Output File Data (AP1000)	I.2-1 to I.2-263
ATTACHMENT I.3	: MACCS2 Output File Data (US-ABWR)	I.3-1 to I.3-265
ATTACHMENT I.4	: MACCS2 Output File Data (U.S. EPR)	I.4-1 to I.4-801
ATTACHMENT I.5	: MACCS2 Output File Data (ABWR, 4300 MWt)	I.5-1 to I.5-374
ATTACHMENT J	: Hope Creek ER MACCS2 Input Files	J-1 to J-243



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	5	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

1 PURPOSE AND SCOPE

The purpose of this analysis is to perform an environmental consequence analysis for the Public Service Enterprise Group (PSEG) Site due atmospheric releases following a severe reactor accident. Severe reactor accidents are defined as accidents with substantial damage to the reactor core and degradation of containment systems. The results of this analysis will be used to assess the consequences of severe accident releases at the PSEG Site in the Early Site Permit Application (ESPA).

Four different reactor technologies are considered here, each with its own set of severe accident scenarios and associated atmospheric release categories. The four reactor technologies are the Advanced Boiling Water Reactor (ABWR), U.S. Advanced Pressurized Water Reactor (US-APWR), U.S. Evolutionary Power Reactor (U.S. EPR), and Advanced Passive 1000 (AP1000) Reactor. The list and the descriptions of the release category scenarios for each of the four reactors are provided in Table 1-1.

The scope of the calculation includes the quantification of the consequences for every release category in Table 1-1. More specifically, the following are calculated in this analysis (per reactor):

- population-weighted dose,
- population-weighted dose due to water ingestion,
- number of people exceeding doses of 25 rem and 200 rem,
- number of fatalities (early fatalities and latent cancer deaths),
- total economic cost, and
- the area of the contaminated farm land.

These parameters are calculated considering an area that is 50 miles within the PSEG Site. Finally, the results are presented in terms of risk with respect to the associated frequency of each release category. The calculated risks for the AP1000 reactor are also presented for the case where the new plant contains two units.

Table 1-1 Severe Accident Release Categories for ABWR, AP1000, US-APWR, and U.S. EPR

Accident Class/Release Category	Description
ABWR (Attachment A.1, Reference 7.9)	
NCL	No loss of containment.
Case 1	Transients followed by failure of high pressure coolant makeup and failure to depressurize in timely fashion.
Case 2	Short-term station blackout with reactor core isolation cooling (RCIC) failure, onsite power recovery in 8 hr.
Case 3	Station blackout with RCIC available for about 8 hr.
Case 4	Station blackout (more than 8 hr) with RCIC failure.
Case 5	Transients followed by failure of high pressure coolant makeup, successful depressurization of reactor, failure of low-pressure coolant makeup.
Case 6	Transient, loss-of-coolant accident (LOCA), and anticipated transient without scram (ATWS)



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	6	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 1-1 Severe Accident Release Categories for ABWR, AP1000, US-APWR, and U.S. EPR

Accident Class/Release Category	Description
	events with successful coolant makeup, but potential prior failure of containment.
Case 7	Small/medium LOCA followed by failure of high-pressure coolant makeup and failure to depressurize.
Case 8	LOCA followed by failure of high pressure coolant makeup.
Case 9	ATWS followed by boron injection failure and successful high-pressure coolant makeup.
AP1000 (Reference 7.7, Chapter 1)	
IC	Intact containment.
CFE	Early containment failure.
CFI	Intermediate containment failure.
CFL	Late containment failure.
CI	Containment isolation failure.
BP	Containment bypass.
US-APWR (Attachment A.3)	
RC1	Containment bypass.
RC2	Containment isolation failure.
RC3	Containment failure before core damage.
RC4	Early containment failure.
RC5	Late containment failure.
RC6	Intact containment.
U.S. EPR (Attachment A.4)	
RC101	No containment failure.
RC201	Containment fails before vessel breach due to isolation failure, melt retained in vessel.
RC202	Containment fails before vessel breach due to isolation failure, melt released from vessel, with MCCI, melt not flooded ex-vessel, with containment sprays.
RC203	Containment fails before vessel breach due to isolation failure, melt released from vessel, with MCCI, melt not flooded ex-vessel, without containment sprays.
RC204	Containment fails before vessel breach due to isolation failure, melt released from vessel, without MCCI, melt flooded ex-vessel with containment sprays.
RC205	Containment failures before vessel breach due to isolation failure, melt released from vessel, without MCCI, melt flooded ex-vessel without containment sprays.
RC206	Small containment failure due to failure to isolate 2" or smaller lines.
RC301	Containment fails before vessel breach due to containment rupture, with MCCI, melt not flooded ex-vessel, with containment sprays.
RC302	Containment fails before vessel breach due to containment rupture, with MCCI, melt not flooded ex-vessel, without containment sprays.
RC303	Containment fails before vessel breach due to containment rupture, without MCCI, melt flooded ex-vessel, with containment sprays.
RC304	Containment fails before vessel breach due to containment rupture, without MCCI, melt flooded ex-vessel, without containment sprays.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	7	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 1-1 Severe Accident Release Categories for ABWR, AP1000, US-APWR, and U.S. EPR

Accident Class/Release Category	Description
RC401	Containment failures after breach and up to melt transfer to the spreading area, with MCCI, without debris flooding, with containment spray.
RC402	Containment failures after breach and up to melt transfer to the spreading area, with MCCI, without debris flooding, without containment spray.
RC403	Containment failures after breach and up to melt transfer to the spreading area, without MCCI, with debris flooding, with containment spray.
RC404	Containment failures after breach and up to melt transfer to the spreading area, without MCCI, with debris flooding, without containment spray.
RC501	Long term containment failure during and after debris quench, due to rupture, with MCCI, without debris flooding, with containment sprays.
RC502	Long term containment failure during and after debris quench, due to rupture, with MCCI, without debris flooding, without containment sprays.
RC503	Long term containment failure during and after debris quench, due to rupture, without MCCI, with debris flooding, with containment sprays.
RC504	Long term containment failure during and after debris quench, due to rupture, without MCCI, with debris flooding, without containment sprays.
RC602	Long term containment failure due to basemat failure, without debris flooding, without containment sprays.
RC701	Steam Generator Tube Rupture with fission product scrubbing.
RC702	Steam Generator Tube Rupture without fission product scrubbing.
RC802	Interfacing System LOCA without fission product scrubbing.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	8	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

2 DESIGN INPUTS

The values used as design inputs to perform the calculations in this document are identified below. In case a design input is used as an input to one of the MACCS2 modules (e.g. ATMOS), an identifier in parenthesis is provided preceding the design input text that identifies the location of the value in the associated input file. For example, ATMOS input file contains a block of data with a heading “NUCLIDE DATA.” For inputs presented in this section that are located in the ATMOS file in this data bloc, a phrase “Nuclide Data” in parenthesis precedes the corresponding design input. Note that MACCS2 sometimes requires input variables to be specified as whole numbers and sometimes as values with at least one decimal point. Moreover, the precision of the inputs obtained from associated referenced documents are not consistent. Due to these factors, numbers presented in the calculation do not follow any specific format, but are based on the associated source document and readability (e.g. scientific notation with two decimal places is used as the default format for relatively large and relatively small numbers).

The meteorology data and the site data files are provided in Attachments C and D, respectively. They were obtained from an environmental consequence analysis for Hope Creek (HC) Generating Station (See Attachment J for HC MACCS2 input files). The HC site data file was adjusted with an updated population distribution (See Design Input 2.1.3).

2.1 GENERAL

- 2.1.1 Inflation-adjustment ratio from 1986 and 2009 is 1.97 (Reference 7.4).
- 2.1.2 Inflation-adjustment ratio from 2008 to 2009 is 1 (No inflation) (Reference 7.4).



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	10	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

2.1.4 The release frequencies for the four reactor technologies are provided in Table 2.1.4-1.

Table 2.1.4-1 Release Frequencies

ABWR ¹		AP1000 ²		US-APWR ³		U.S. EPR ⁴	
Release Category	Frequency (Reactor-Year)	Release Category	Frequency (Reactor-Year)	Release Category	Frequency (Reactor-Year)	Release Category	Frequency (Reactor-Year)
NCL	1.34E-07	IC	2.21E-07	RC1	7.5E-09	RC101	3.43E-07
Case 1	2.08E-08	CFE	7.47E-09	RC2	2.1E-09	RC201	4.98E-10
Case 2	1.00E-10	CFI	1.89E-10	RC3	2.0E-08	RC202	3.97E-14
Case 3	1.00E-10	CFL	3.45E-13	RC4	1.1E-08	RC203	1.92E-12
Case 4	1.00E-10	CI	1.33E-09	RC5	6.5E-08	RC204	2.78E-11
Case 5	1.00E-10	BP	1.05E-08	RC6	1.1E-06	RC205	4.08E-10
Case 6	1.00E-10					RC206	1.65E-08
Case 7	3.91E-10					RC301	1.67E-12
Case 8	4.05E-10					RC302	2.18E-11
Case 9	1.70E-10					RC303	2.30E-09
						RC304	1.75E-08
						RC401	1.38E-11
						RC402	2.75E-10
						RC403	6.82E-10
						RC404	1.34E-08
						RC501	5.92E-13
						RC502	2.87E-10
						RC503	6.01E-10
						RC504	1.19E-07
						RC602	6.50E-10
						RC701	1.02E-08
						RC702	5.38E-09
						RC802	2.64E-10

Notes:

1. Attachment A.1.
2. Reference 7.7, Table 1B-1.
3. Reference 7.5, Table 10a.
4. Attachment A.4.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	11	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

2.2 ATMOS Model

2.2.1 General

2.2.1.1 (Nuclide Data) The chemical groups for the nuclides of the source term follow the definitions established in Reference 7.1, Appendix C, and Reference 7.3, Appendix A. The nine chemical groups are listed in Table 2.2.1.1-1. The assignment of source term nuclides (for all reactor technologies) into the chemical groups is given in Table 2.2.1.1-2. Note that the list of source term nuclides is discussed further in Section 3.2.2.

Table 2.2.1.1-1 Group Assignment for Source Terms

Group	Description
1	Noble Gases
2	Iodine
3	Cesium, Rubidium
4	Tellurium Group
5	Strontium
6	Molybdenum, Cobalt, Ruthenium, Technetium
7	Lanthanum, Yttrium, Neodymium, Promethium, Americium, Curium
8	Cerium, Actinides (Plutonium, Neptunium)
9	Barium

Table 2.2.1.1-2 Chemical Group Assignment for Source Term Nuclides

Group	Nuclide
1	Kr-85, Kr-85m, Kr-87, Kr-88, Xe-133, Xe-135
2	I-131, I-132, I-133, I-134, I-135
3	Rb-86, Cs-134, Cs-136, Cs-137
4	Sb-127, Sb-129, Te-127, Te-127m, Te-129, Te-129m, Te-131m, Te-132
5	Sr-89, Sr-90, Sr-91, Sr-92
6	Co-58, Co-60, Mo-99, Tc-99m, Ru-103, Ru-105, Ru-106, Rh-105
7	Y-90, Y-91, Y-92, Y-93, Zr-95, Zr-97, Nb-95, La-140, La-141, La-142, Pr-143, Nd-147, Am-241, Cm-242, Cm-244
8	Ce-141, Ce-143, Ce-144, Np-239, Pu-238, Pu-239, Pu-240, Pu-241
9	Ba-139, Ba-140

Notes:

1. For ABWR (See Attachment A.1) there are 7 groups. Groups 9 and 5 are combined into one (Group 5), and Groups 7 and 8 are combined into one (Group 7).

2.2.1.2 (Wet Deposition Data) The linear coefficient used in expression defining rate constant for plume washout from rainfall is 9.5E-05 1/s. This is a recommended value based on Reference 7.3, Table 2.9. For a description of equation that utilizes this value see MACCS2 User's Guide, Section 5.7 (Reference 7.1).



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	12	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

2.2.1.3 (Wet Deposition Data) The exponential coefficient used in expression defining rate constant for plume washout from rainfall is 0.8. This is a recommended value based on Reference 7.3, Table 2.9. For a description of equation that utilizes this value see MACCS2 User's Guide, Section 5.7 (Reference 7.1).

2.2.1.4 (Dispersion Parameter Data) Coefficients used to estimate dispersion parameters, σ_y and σ_z , using the power-law model are provided in Table 2.2.1.4-1. These values were obtained from Reference 7.3, Table 2.4.

Table 2.2.1.4-1 Power-Law Parameter Values for MACCS2

Stability class	A	B	C	D	E	F
Pre-exponential coefficient (a^1) for σ_y	0.3658	0.2751	0.2089	0.1474	0.1046	0.0722
Exponent (b^1) for σ_y	0.9031	0.9031	0.9031	0.9031	0.9031	0.9031
Pre-exponential coefficient (c^1) for σ_z	2.50E-04	1.90E-03	0.2	0.3	0.4	0.2
Exponent (d^1) for σ_z	2.125	1.6021	0.8543	0.6532	0.6021	0.602

Notes:

1. For descriptions of equations that utilize variables a, b, c, and d, see Reference 7.1, Section 5.7.

2.2.1.5 (Dispersion Parameter Data) The linear scaling factor used for the σ_z approximation is equal to 1.27, and the linear scaling factor used for the σ_y approximation is equal to 1. These values are based on sample input files in MACCS2 User's Manual, Appendix C (Reference 7.1) and NUREG-4551, Appendix A (Reference 7.3).

2.2.1.6 (Plume Meander Data) The time base of 10 minutes (600 seconds) is used to parameterize the plume meander adjustment factor. The plume meander adjustment factor also utilizes exponential factors of 0.2 (release duration between 0 and 3600 seconds) and 0.25 (release duration between 3600 and 36000 seconds). These values are based on recommendations provided in NUREG-4551, Sections 2.3.1 and 2.3.2 (Reference 7.3).

2.2.1.7 (Plume Rise Data) The scaling factors for the plume rise data are not utilized to control the associated input parameters. Therefore, they are all set to 1 (a number multiplied by 1 does not change). See Reference 7.1, Section 5.9.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	13	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

2.2.2 ABWR

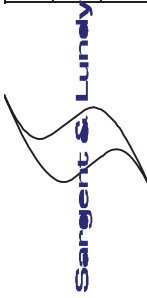
2.2.2.1 (Wake Effects Data) Per Attachment A.1, the wake effects are based on building dimensions of 54.0 m (width) and 37.7 m (height). This yields initial values of 12.6 (54.0/4.3) for σ_y and 17.5 (37.7/2.15) for σ_z .

2.2.2.2 (Release Data) The list of ABWR nuclides and the associated inventory modeled in MACCS2 is provided in Table 2.2.2.1-1 (Vendor Data, Attachment A.1).

Table 2.2.2.1-1 ABWR MACCS2 Nuclide Inventory Data

Nuclide	Inventory (Bq/MWt)	Nuclide	Inventory (Bq/MWt)	Nuclide	Inventory (Bq/MWt)
Co-58	3.515E+12	Ru-103	1.569E+15	Cs-136	4.364E+13
Co-60	2.118E+10	Ru-105	1.106E+15	Cs-137	1.230E+14
Kr-85	1.116E+13	Ru-106	5.556E+14	Ba-139	1.825E+15
Kr-85m	2.492E+14	Rh-105	9.337E+14	Ba-140	1.756E+15
Kr-87	4.779E+14	Sb-127	8.452E+13	La-140	1.860E+15
Kr-88	6.771E+14	Sb-129	2.989E+14	La-141	1.641E+15
Rb-86	1.737E+12	Te-127	8.343E+13	La-142	1.606E+15
Sr-89	9.142E+14	Te-127m	1.262E+13	Ce-141	1.628E+15
Sr-90	9.555E+13	Te-129	2.812E+14	Ce-143	1.536E+15
Sr-91	1.170E+15	Te-129m	7.625E+13	Ce-144	1.307E+15
Sr-92	1.247E+15	Te-131m	1.379E+14	Pr-143	1.519E+15
Y-90	1.031E+14	Te-132	1.403E+15	Nd-147	6.694E+14
Y-91	1.191E+15	I-131	9.733E+14	Np-239	2.263E+16
Y-92	1.253E+15	I-132	1.423E+15	Pu-238	5.866E+12
Y-93	1.448E+15	I-133	2.036E+15	Pu-239	5.055E+11
Zr-95	1.635E+15	I-134	2.241E+15	Pu-240	8.318E+11
Zr-97	1.679E+15	I-135	1.922E+15	Pu-241	1.999E+14
Nb-95	1.634E+15	Xe-133	2.045E+15	Am-241	1.627E+11
Mo-99	1.853E+15	Xe-135	2.645E+14	Cm-242	1.187E+14
Tc-99m	1.599E+15	Cs-134	1.982E+14	Cm-244	2.719E+12

2.2.2.3 (Release Data) Per Reference 7.6 (Page 1.1-4) the ABWR has a rated power level of 3926 MWt and a design power level of 4005 MWt. An increased power level is also considered for the ABWR in this analysis, that is, a power level of 4300 MWt. Since the ABWR core inventory data depends on the reactor power level (core inventory in units of Bq/MWt), the results for the ABWR are provided for both power levels, 4005 MWt and 4300 MWt, for completeness.



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 14 of 105

Safety Related Non-Safety Related

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date
Equip. No.		

2.2.2.4 (Release Data) Plume data used in the input file for ATMOS is taken from Attachment A.1 and is summarized in Table 2.2.2.4.-1.

Table 2.2.2.4-1 ABWR MACCS2 Plume Data (See Bottom Portion for Converted Units)

Release Category	Plume No.	Alarm Initiation (Hours)	Heat Release Rate (calorie/s)	Release Height (Meters)	Start Time (Hours)	Duration (Hours)	Group No.1	Group No.2	Group No.3	Group No.4	Group No.5	Group No.6	Group No.7	Converted Units		
														(Seconds)	(Watts)	
NCL	1	1.70E+00	3.30E+05	3.70E+01	2.70E+00	1.00E+01	4.40E-02	0.00E+00	2.30E-05	2.30E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 1	1	1.92E+01	3.30E+05	3.70E+01	2.00E+01	1.00E+00	1.00E+00	0.00E+00	1.50E-07	1.30E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 2	1	1.82E+01	3.30E+05	3.70E+01	1.90E+01	1.00E+00	1.00E+00	0.00E+00	5.00E-06	5.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 3	1	4.92E+01	3.30E+05	3.70E+01	5.00E+01	1.00E+01	1.00E+00	0.00E+00	2.80E-04	2.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 4	1	1.92E+01	3.30E+05	3.70E+01	2.00E+01	1.00E+00	1.00E+00	0.00E+00	1.60E-03	1.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 5	1	1.82E+01	3.30E+05	3.70E+01	1.90E+01	1.00E+00	1.00E+00	0.00E+00	6.00E-03	5.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 6	1	1.82E+01	3.30E+05	3.70E+01	1.90E+01	1.00E+01	1.00E+00	0.00E+00	3.10E-02	7.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 7	1	1.92E+01	3.30E+05	3.70E+01	2.00E+01	1.00E+01	1.00E+00	0.00E+00	8.90E-02	9.90E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 8	1	1.20E+00	1.00E+06	3.70E+01	2.00E+00	1.00E+01	1.00E+00	0.00E+00	1.90E-01	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 9	1	1.22E+01	3.30E+05	3.70E+01	2.36E+01	1.00E+01	1.00E+00	0.00E+00	3.70E-01	3.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		(Seconds)	(Watts)	(Meters)	(Seconds)	(Seconds)										
NCL	1	6.12E+03	1.38E+06	3.70E+01	9.72E+03	3.60E+04	4.40E-02	0.00E+00	2.30E-05	2.30E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 1	1	6.91E+04	1.38E+06	3.70E+01	7.20E+04	3.60E+03	1.00E+00	0.00E+00	1.50E-07	1.30E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 2	1	6.55E+04	1.38E+06	3.70E+01	6.84E+04	3.60E+03	1.00E+00	0.00E+00	5.00E-06	5.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 3	1	1.77E+05	1.38E+06	3.70E+01	1.80E+05	3.60E+04	1.00E+00	0.00E+00	2.80E-04	2.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 4	1	6.91E+04	1.38E+06	3.70E+01	7.20E+04	3.60E+03	1.00E+00	0.00E+00	1.60E-03	1.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 5	1	6.55E+04	1.38E+06	3.70E+01	6.84E+04	3.60E+03	1.00E+00	0.00E+00	6.00E-03	5.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 6	1	6.55E+04	1.38E+06	3.70E+01	6.84E+04	3.60E+04	1.00E+00	0.00E+00	3.10E-02	7.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 7	1	6.91E+04	1.38E+06	3.70E+01	7.20E+04	3.60E+04	1.00E+00	0.00E+00	8.90E-02	9.90E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 8	1	4.32E+03	4.18E+06	3.70E+01	7.20E+03	3.60E+04	1.00E+00	0.00E+00	1.90E-01	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Case 9	1	4.39E+04	1.38E+06	3.70E+01	8.50E+04	3.60E+04	1.00E+00	0.00E+00	3.70E-01	3.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Notes:
1. 1 calorie/s = 4,18400 Watts.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	15	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

2.2.3 AP1000

The plume data, including source terms and release fractions for chemical groups, is based on Vogtle ESP MACCS2 input provided in Attachment A.2 and is summarized in Table 2.2.3.3-1. The Vogtle ATMOS file from Attachment A.2 was updated with the inputs specified below (Section 2.2.3), and as necessary to reflect the general design inputs (Section 2.2.1) and assumptions (Section 3.2) appropriate for the PSEG Site analysis.

2.2.3.1 (Wake Effects Data) Per Reference 7.7, Section 3.8.2.1.1, the wake effects are based on building dimensions of 130 feet (39.62 m) (width) and 215.33 feet (65.63 m) (height). This yields initial values of 9.21 (39.62/4.3) for σ_y and 30.53 (65.63/2.15) for σ_z .

2.2.3.2 (Release Data) The list of AP1000 nuclides and the associated inventory modeled in MACCS2 is provided in Table 2.2.3.2-1 (Reference 7.7, Table 15A-3).

Table 2.2.3.2-1 AP1000 MACCS2 Nuclide Inventory Data

Nuclide	Inventory (Ci)	Nuclide	Inventory (Ci)	Nuclide	Inventory (Ci)
Co-58	0.00E+00	Ru-103	1.45E+08	Cs-136	5.53E+06
Co-60	0.00E+00	Ru-105	9.83E+07	Cs-137	1.13E+07
Kr-85	1.06E+06	Ru-106	4.77E+07	Ba-139	1.78E+08
Kr-85m	2.63E+07	Rh-105	9.00E+07	Ba-140	1.71E+08
Kr-87	5.07E+07	Sb-127	1.03E+07	La-140	1.82E+08
Kr-88	7.14E+07	Sb-129	3.10E+07	La-141	1.62E+08
Rb-86	2.29E+05	Te-127	1.02E+07	La-142	1.57E+08
Sr-89	9.66E+07	Te-127m	1.32E+06	Ce-141	1.63E+08
Sr-90	8.31E+06	Te-129	3.04E+07	Ce-143	1.52E+08
Sr-91	1.20E+08	Te-129m	4.50E+06	Ce-144	1.23E+08
Sr-92	1.29E+08	Te-131m	1.40E+07	Pr-143	1.46E+08
Y-90	8.66E+06	Te-132	1.38E+08	Nd-147	6.48E+07
Y-91	1.24E+08	I-131	9.63E+07	Np-239	1.93E+09
Y-92	1.30E+08	I-132	1.40E+08	Pu-238	3.83E+05
Y-93	1.49E+08	I-133	1.99E+08	Pu-239	3.37E+04
Zr-95	1.66E+08	I-134	2.18E+08	Pu-240	4.94E+04
Zr-97	1.64E+08	I-135	1.86E+08	Pu-241	1.11E+07
Nb-95	1.67E+08	Xe-133	1.90E+08	Am-241	1.25E+04
Mo-99	1.84E+08	Xe-135	4.84E+07	Cm-242	2.95E+06
Tc-99m	1.61E+08	Cs-134	1.94E+07	Cm-244	3.62E+05



Calcs. For ENVIRONMENTAL CONSEQUENCE

2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 16 of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

2.2.3.3 (Release Data) Plume data used in the input file for ATMOS is taken from Attachment A.2 and is summarized in Table 2.2.3.3-1.

Table 2.2.3.3-1 AP1000 MACCS2 Plume Data

Release Category	Plume No.	Alarm Initiation (Seconds)	Heat Release Rate (Watts)	Release Height (Meters)	Start Time (Seconds)	Duration (Seconds)	Group No. 1	Group No. 2	Group No. 3	Group No. 4	Group No. 5	Group No. 6	Group No. 7	Group No. 8	Group No. 9
CFI	1	2.92E+03	0	0	2.92E+03	2.97E+04	5.40E-01	3.19E-03	3.18E-03	4.18E-04	2.11E-02	9.11E-03	3.53E-03	2.64E-05	1.62E-02
	2	2.92E+03	0	0	3.26E+04	3.60E+04	2.58E-01	1.35E-04	1.35E-04	1.67E-05	6.50E-04	1.68E-04	4.53E-03	1.68E-05	3.40E-04
	3	2.92E+03	0	0	8.64E+04	3.60E+04	8.40E-02	0.00E+00	0.00E+00	4.47E-06	0.00E+00	0.00E+00	6.00E-03	2.17E-05	0.00E+00
	4	2.92E+03	0	0	1.73E+05	3.60E+04	3.83E-02	0.00E+00	0.00E+00	1.57E-06	0.00E+00	0.00E+00	5.22E-03	1.89E-05	0.00E+00
CFE	1	3.00E+03	0	0	3.00E+03	1.68E+04	4.16E-01	5.53E-02	5.37E-02	1.23E-03	3.14E-03	1.16E-02	5.57E-05	9.54E-07	4.63E-03
	2	3.00E+03	0	0	1.98E+04	3.60E+04	4.05E-01	1.26E-03	1.21E-03	1.61E-04	3.43E-04	2.58E-03	9.66E-06	4.56E-08	6.45E-04
	3	3.00E+03	0	0	9.00E+04	3.60E+04	1.08E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	4	3.00E+03	0	0	1.76E+05	3.60E+04	3.43E-02	0.00E+00	0.00E+00	6.04E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
IC	1	4.38E+03	0	0	4.38E+03	3.60E+04	9.83E-04	1.20E-05	1.15E-05	8.04E-07	1.07E-05	1.31E-05	1.35E-06	5.85E-09	1.20E-05
	2	4.38E+03	0	0	8.48E+04	3.60E+04	4.93E-04	0.00E+00	0.00E+00	4.83E-09	0.00E+00	0.00E+00	6.00E-09	3.20E-11	0.00E+00
	3	4.38E+03	0	0	1.34E+05	3.60E+04	3.94E-04	0.00E+00	0.00E+00	1.21E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	4	4.38E+03	0	0	1.78E+05	3.60E+04	7.72E-04	0.00E+00	0.00E+00	6.04E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BP	1	3.19E+04	0	0	3.19E+04	1.46E+04	1.00E+00	1.69E-01	1.62E-01	6.27E-03	3.57E-03	4.48E-02	1.30E-04	3.19E-06	8.93E-03
	2	3.19E+04	0	0	4.64E+04	3.60E+04	0.00E+00	4.64E-02	3.38E-02	3.12E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-06
	3	3.19E+04	0	0	8.65E+04	3.60E+04	0.00E+00	2.31E-01	6.60E-02	5.32E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	4	3.19E+04	0	0	1.73E+05	3.60E+04	0.00E+00	2.80E-03	9.96E-03	1.57E-03	0.00E+00	0.00E+00	0.00E+00	1.00E-06	0.00E+00
CI	1	1.01E+02	0	0	1.01E+02	3.60E+04	5.73E-01	4.56E-02	2.10E-02	1.64E-03	2.03E-02	4.04E-02	2.39E-04	2.97E-06	3.16E-02
	2	1.01E+02	0	0	5.00E+04	3.60E+04	1.13E-01	0.00E+00	0.00E+00	1.15E-05	0.00E+00	0.00E+00	1.00E-07	0.00E+00	0.00E+00
	3	1.01E+02	0	0	1.36E+05	3.60E+04	5.66E-02	0.00E+00	0.00E+00	8.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	4	1.01E+02	0	0	2.12E+05	3.60E+04	2.74E-02	0.00E+00	0.00E+00	1.27E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CFL	1	2.92E+03	0	0	2.92E+03	2.34E+04	3.36E-04	1.20E-05	1.15E-05	1.00E-06	1.57E-05	1.68E-05	9.96E-07	7.41E-09	1.61E-05
	2	2.92E+03	0	0	2.64E+04	3.60E+04	1.19E-03	5.00E-08	3.23E-08	1.75E-08	1.04E-06	2.90E-07	1.07E-05	4.05E-08	6.60E-07
	3	2.92E+03	0	0	1.08E+05	3.60E+04	9.79E-01	2.13E-05	1.16E-05	2.47E-05	2.39E-03	1.26E-03	9.75E-02	3.68E-04	2.25E-03
	4	2.92E+03	0	0	1.94E+05	3.60E+04	0.00E+00	0.00E+00	2.56E-07	1.20E-05	4.42E-04	1.55E-04	4.39E-02	1.66E-04	3.46E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	17	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

2.2.4 US-APWR

2.2.4.1 (Wake Effects Data) Per Attachment A.3, the wake effects are based on building dimensions of 48.1 m (width) and 64.7 m (height). This yields initial values of 11.2 (48.1/4.3) for σ_y and 30.1 (64.7/2.15) for σ_z .

2.2.4.2 (Release Data) The list of US-APWR nuclides and the associated inventory modeled in MACCS2 is provided in Table 2.2.4.2-1 (Vendor Data, Attachment A.3).

Table 2.2.4.2-1 US-APWR MACCS2 Nuclide Inventory Data

Nuclide	Inventory (Ci)	Nuclide	Inventory (Ci)	Nuclide	Inventory (Ci)
Co-58	0.00E+00	Ru-103	1.90E+08	Cs-136	9.05E+06
Co-60	4.26E+05	Ru-105	1.32E+08	Cs-137	1.89E+07
Kr-85	1.70E+06	Ru-106	7.38E+07	Ba-139	2.16E+08
Kr-85m	3.04E+07	Rh-105	1.23E+08	Ba-140	2.09E+08
Kr-87	5.79E+07	Sb-127	1.34E+07	La-140	2.18E+08
Kr-88	8.14E+07	Sb-129	3.95E+07	La-141	1.97E+08
Rb-86	3.33E+05	Te-127	1.33E+07	La-142	1.90E+08
Sr-89	1.11E+08	Te-127m	1.77E+06	Ce-141	1.99E+08
Sr-90	1.36E+07	Te-129	3.89E+07	Ce-143	1.82E+08
Sr-91	1.38E+08	Te-129m	5.80E+06	Ce-144	1.61E+08
Sr-92	1.50E+08	Te-131m	1.76E+07	Pr-143	1.79E+08
Y-90	1.44E+07	Te-132	1.71E+08	Nd-147	7.97E+07
Y-91	1.44E+08	I-131	1.21E+08	Np-239	2.54E+09
Y-92	1.51E+08	I-132	1.74E+08	Pu-238	7.32E+05
Y-93	1.76E+08	I-133	2.43E+08	Pu-239	5.53E+04
Zr-95	2.07E+08	I-134	2.66E+08	Pu-240	8.67E+04
Zr-97	2.10E+08	I-135	2.27E+08	Pu-241	1.92E+07
Nb-95	2.09E+08	Xe-133	2.44E+08	Am-241	2.59E+04
Mo-99	2.27E+08	Xe-135	6.89E+07	Cm-242	6.42E+06
Tc-99m	1.99E+08	Cs-134	3.32E+07	Cm-244	7.80E+05



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2 Date

Page 18 of 105

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

2.2.4.3 (Release Data) Plume data used in the input file for ATMOS is taken from Attachment A.3 and is summarized in Table 2.2.4.3-1.

Table 2.2.4.3-1 US-APWR MACCS2 Plume Data

Release Category	Plume No.	Alarm Initiation (Seconds)	Heat Release Rate (Watts)	Release Height (Meters)	Start Time (Seconds)	Duration (Seconds)	Group No. 1	Group No. 2	Group No. 3	Group No. 4	Group No. 5	Group No. 6	Group No. 7	Group No. 8	Group No. 9
RC1	1	1.05E+05	0	0	1.02E+05	1.52E+04	6.88E-01	1.96E-01	1.56E-01	8.55E-02	3.49E-04	1.45E-02	1.47E-05	4.34E-05	2.90E-03
	2	1.05E+05	0	0	1.17E+05	3.60E+04	2.48E-01	8.73E-02	3.91E-02	3.91E-02	4.55E-03	3.87E-03	2.25E-04	2.38E-04	8.82E-03
	3	1.05E+05	0	0	1.53E+05	8.64E+04*	2.72E-03	4.03E-03	8.47E-03	7.88E-03	3.71E-03	4.21E-03	2.12E-03	1.35E-03	3.50E-03
	4	1.05E+05	0	0	2.39E+05	8.64E+04*	4.87E-03	2.29E-03	2.66E-03	6.09E-04	1.85E-04	7.59E-05	6.23E-04	5.30E-04	9.68E-05
RC2	1	1.16E+04	0	0	9.01E+03	3.28E+04	7.31E-01	3.61E-02	2.13E-02	3.56E-02	5.14E-03	1.50E-02	3.62E-03	1.95E-03	8.12E-03
	2	1.16E+04	0	0	4.18E+04	5.32E+04*	2.38E-01	3.22E-02	4.19E-03	7.24E-03	2.61E-04	7.07E-04	4.01E-04	3.65E-04	4.38E-04
	3	1.16E+04	0	0	9.50E+04	6.81E+04*	2.20E-02	1.65E-01	1.16E-02	2.86E-02	1.23E-03	4.00E-05	5.18E-05	1.58E-04	1.50E-03
	4	1.16E+04	0	0	1.63E+05	8.64E+04*	5.37E-03	4.70E-02	5.46E-03	5.88E-03	1.11E-03	6.12E-05	5.64E-05	2.47E-04	1.11E-03
RC3	1	1.72E+05	0	0	1.70E+05	4.12E+04*	9.38E-01	4.70E-01	4.58E-01	4.19E-01	4.22E-02	2.71E-01	1.49E-03	6.33E-03	1.02E-01
	2	1.72E+05	0	0	2.11E+05	4.39E+04*	4.74E-02	8.37E-03	6.51E-03	6.41E-03	1.77E-03	4.94E-03	6.60E-05	8.66E-05	3.49E-03
	3	1.72E+05	0	0	2.55E+05	8.34E+04*	1.45E-03	1.03E-03	1.11E-03	2.84E-03	4.37E-04	1.84E-04	6.37E-06	6.00E-05	2.24E-04
	4	1.72E+05	0	0	3.39E+05	8.64E+04*	5.54E-04	2.46E-04	1.80E-05	1.49E-03	5.37E-05	0.00E+00	2.33E-07	2.75E-06	2.42E-05
RC4	1	1.83E+04	0	0	7.80E+04	1.58E+04	9.98E-01	3.79E-02	3.29E-02	4.88E-02	4.53E-03	2.38E-02	1.21E-04	3.67E-04	2.29E-02
	2	1.83E+04	0	0	9.38E+04	3.17E+04	1.56E-03	1.66E-02	8.59E-03	3.77E-03	3.05E-04	2.79E-03	6.78E-07	3.49E-06	5.64E-04
	3	1.83E+04	0	0	1.25E+05	8.63E+04*	2.72E-04	7.50E-03	3.40E-03	7.78E-03	1.32E-03	1.08E-05	1.51E-05	4.73E-04	4.69E-04
	4	1.83E+04	0	0	2.12E+05	8.64E+04*	1.04E-04	6.34E-03	1.11E-03	2.78E-03	1.51E-06	0.00E+00	3.05E-08	9.57E-07	9.97E-07
RC5	1	1.16E+04	0	0	1.89E+05	1.01E+04	9.28E-01	2.72E-03	1.06E-03	6.42E-03	8.05E-05	9.95E-05	2.99E-05	1.87E-05	6.61E-05
	2	1.16E+04	0	0	1.99E+05	6.03E+04*	3.53E-02	2.23E-02	4.21E-03	2.53E-03	1.45E-06	1.92E-06	5.29E-07	3.42E-07	1.60E-06
	3	1.16E+04	0	0	2.59E+05	8.31E+04*	1.83E-02	6.02E-02	8.03E-03	3.11E-03	5.15E-07	1.70E-06	5.69E-08	4.62E-08	1.30E-06
	4	1.16E+04	0	0	3.42E+05	8.64E+04*	6.47E-03	5.72E-02	6.42E-03	4.56E-03	1.64E-06	9.22E-07	2.10E-09	1.29E-08	3.67E-06
RC6	1	1.80E+03	0	0	1.27E+03	1.37E+04	1.24E-04	1.68E-06	1.66E-06	1.30E-06	1.55E-07	6.31E-07	3.19E-09	5.31E-09	2.44E-07
	2	1.80E+03	0	0	1.49E+04	7.27E+04*	6.54E-04	1.46E-09	0.00E+00	6.96E-09	1.79E-08	6.46E-09	2.88E-10	2.76E-10	2.45E-08
	3	1.80E+03	0	0	8.77E+04	8.64E+04*	6.90E-04	1.86E-09	0.00E+00	5.08E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	4	1.80E+03	0	0	1.74E+05	8.63E+04*	6.45E-04	0.00E+00	0.00E+00	8.88E-11	6.46E-11	4.43E-11	4.55E-13	1.23E-12	6.38E-11



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 19 of 105

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related
Project	PSEG ESPA	Prepared by		Date
Proj. No	12380-001	Reviewed by		Date
	Equip. No.	Approved by		Date

Table 2.2.4.3-1 US-APWR MACCS2 Plume Data

Release Category	Plume No.	Alarm Initiation (Seconds)	Heat Release Rate (Watts)	Release Height (Meters)	Start Time (Seconds)	Duration (Seconds)	Group No. 1	Group No. 2	Group No. 3	Group No. 4	Group No. 5	Group No. 6	Group No. 7	Group No. 8	Group No. 9

Notes:

* Per Reference 7.1, Section 5.8, MACCS2 methodology supports modeling of plumes that do not exceed 10 hours (36000 seconds) in duration. Therefore, the plume duration in the input file for the US-APWR (Attachment G), for each case identified in the table above, was capped to 36000 seconds.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	20	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

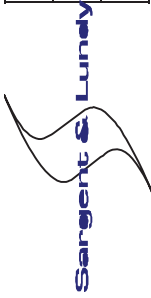
2.2.5 U.S. EPR

2.2.5.1 (Wake Effects Data) Per Attachment A.4, the wake effects are based on a building height of 63.30 m and initial values of 25.37 for σ_y and 28.98 for σ_z .

2.2.5.2 (Release Data) The list of U.S. EPR nuclides and the associated inventory modeled in MACCS2 is provided in Table 2.2.5.2-1 (Vendor Data, Attachment A.4).

Table 2.2.5.2-1 U.S. EPR MACCS2 Nuclide Inventory Data

Nuclide	Inventory (Ci)	Nuclide	Inventory (Ci)	Nuclide	Inventory (Ci)
Co-58	0.00E+00	Ru-103	2.42E+08	Cs-136	1.61E+07
Co-60	0.00E+00	Ru-105	1.96E+08	Cs-137	2.47E+07
Kr-85	2.10E+06	Ru-106	1.43E+08	Ba-139	2.62E+08
Kr-85m	4.50E+07	Rh-105	1.75E+08	Ba-140	2.52E+08
Kr-87	9.02E+07	Sb-127	1.80E+07	La-140	2.54E+08
Kr-88	1.29E+08	Sb-129	4.85E+07	La-141	2.41E+08
Rb-86	5.80E+05	Te-127	1.79E+07	La-142	2.35E+08
Sr-89	1.61E+08	Te-127m	2.43E+06	Ce-141	2.24E+08
Sr-90	1.69E+07	Te-129	4.78E+07	Ce-143	2.28E+08
Sr-91	2.07E+08	Te-129m	7.08E+06	Ce-144	1.70E+08
Sr-92	2.14E+08	Te-131m	2.04E+07	Pr-143	2.26E+08
Y-90	1.79E+07	Te-132	1.98E+08	Nd-147	9.44E+07
Y-91	1.96E+08	I-131	1.39E+08	Np-239	3.82E+09
Y-92	2.14E+08	I-132	2.01E+08	Pu-238	1.46E+06
Y-93	2.34E+08	I-133	2.90E+08	Pu-239	6.14E+04
Zr-95	2.29E+08	I-134	3.18E+08	Pu-240	1.40E+05
Zr-97	2.43E+08	I-135	2.69E+08	Pu-241	2.53E+07
Nb-95	2.29E+08	Xe-133	2.89E+08	Am-241	2.88E+04
Mo-99	2.59E+08	Xe-135	9.26E+07	Cm-242	1.31E+07
Tc-99m	2.27E+08	Cs-134	6.48E+07	Cm-244	6.94E+06



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

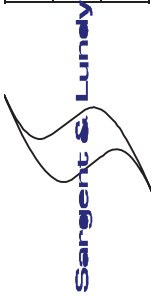
Calc No. 2009-11222
Rev. 2 Date
Page 21 of 105

Client PSEG Nuclear Development	Prepared by _____ Date _____
Project PSEG ESPA	Reviewed by _____ Date _____
Proj. No 12380-001	Approved by _____ Date _____
Equip. No. _____	

2.2.5.3 (Release Data) Plume data used in the input file for ATMOS is taken from Attachment A.4 and is summarized in Table 2.2.5.3-1.

Table 2.2.5.3-1 U.S. EPR MACCS2 Plume Data

Release Category	Plume No.	Alarm Initiation (Seconds)	Heat Release Rate (Watts)	Release Height (Meters)	Start Time (Seconds)	Duration (Seconds)	Group No. 1	Group No. 2	Group No. 3	Group No. 4	Group No. 5	Group No. 6	Group No. 7	Group No. 8	Group No. 9
RC101	1	8.68E+03	1.81E+04	6.05E+01	1.44E+04	5.76E+04*	1.90E-03	2.40E-05	2.00E-05	5.30E-05	8.50E-06	4.40E-05	2.80E-07	7.30E-07	2.40E-05
RC201	1	8.46E+03	5.68E+08	8.39E-01	1.22E+04	1.08E+03	3.60E-01	1.00E-01	9.50E-02	7.60E-03	7.80E-05	1.10E-03	3.40E-06	1.70E-05	4.10E-04
RC202	1	8.46E+03	2.25E+08	8.39E-01	1.22E+04	3.10E+04	7.90E-01	2.30E-02	1.50E-02	2.00E-02	2.40E-04	3.40E-03	1.90E-05	6.80E-05	2.40E-03
RC203	1	8.46E+03	2.50E+08	8.39E-01	1.22E+04	3.10E+04	8.90E-01	5.30E-02	2.80E-02	1.60E-01	1.40E-04	6.80E-03	1.50E-05	2.40E-04	2.20E-03
RC204	1	8.46E+03	2.60E+08	8.39E-01	1.22E+04	2.92E+04	9.50E-01	2.80E-02	1.60E-02	3.60E-02	1.70E-04	5.30E-03	1.40E-05	6.20E-05	3.20E-03
RC205	1	8.46E+03	3.08E+08	8.39E-01	1.22E+04	2.92E+04	9.80E-01	5.70E-02	3.60E-02	9.30E-02	4.00E-03	9.80E-03	3.00E-04	5.30E-04	6.10E-03
RC206	1	8.53E+03	2.04E+06	8.27E-01	1.30E+04	2.48E+04	1.90E-01	5.60E-03	5.00E-03	9.00E-03	1.20E-03	7.30E-03	5.50E-05	1.80E-04	4.20E-03
RC301	1	8.46E+03	2.25E+08	8.39E-01	1.22E+04	3.10E+04	7.90E-01	2.30E-02	1.50E-02	2.00E-02	2.40E-04	3.40E-03	1.90E-05	6.80E-05	2.40E-03
RC302	1	8.46E+03	2.50E+08	8.39E-01	1.22E+04	3.10E+04	8.90E-01	5.30E-02	2.80E-02	1.60E-01	1.40E-04	6.80E-03	1.50E-05	2.40E-04	2.20E-03
RC303	1	8.46E+03	2.60E+08	8.39E-01	1.22E+04	2.92E+04	9.50E-01	2.80E-02	1.60E-02	3.60E-02	1.70E-04	5.30E-03	1.40E-05	6.20E-05	3.20E-03
RC304	1	8.46E+03	3.08E+08	8.39E-01	1.22E+04	2.92E+04	9.80E-01	5.70E-02	3.60E-02	9.30E-02	4.00E-03	9.80E-03	3.00E-04	5.30E-04	6.10E-03
RC401	1	8.68E+03	3.73E+08	3.57E+01	3.20E+04	1.76E+04	8.00E-01	4.60E-03	2.30E-03	3.40E-03	2.70E-03	1.50E-03	8.00E-05	3.40E-04	5.20E-03
RC402	1	8.68E+03	3.73E+08	3.57E+01	3.20E+04	5.80E+04*	9.70E-01	2.00E-02	1.00E-02	1.20E-02	3.80E-03	2.10E-03	1.10E-04	4.90E-04	7.30E-03
RC403	1	8.68E+03	3.73E+08	3.57E+01	3.20E+04	1.76E+04	8.00E-01	4.60E-03	2.30E-03	3.40E-03	2.70E-03	1.50E-03	8.00E-05	3.40E-04	5.20E-03
RC404	1	8.68E+03	3.73E+08	3.57E+01	3.20E+04	5.80E+04*	9.70E-01	2.00E-02	1.00E-02	1.20E-02	3.80E-03	2.10E-03	1.10E-04	4.90E-04	7.30E-03
RC501	1	8.68E+03**	5.03E+08	3.57E+01	2.16E+05	2.88E+05*	9.90E-01	7.70E-04	4.00E-04	1.70E-02	7.40E-06	4.40E-05	2.20E-07	7.00E-07	2.40E-05
RC502	1	8.68E+03	5.03E+08	3.57E+01	2.16E+05	2.88E+05*	9.90E-01	7.70E-04	4.00E-04	1.70E-02	7.40E-06	4.40E-05	2.20E-07	7.00E-07	2.40E-05
RC503	1	8.68E+03**	3.20E+09	3.57E+01	3.02E+05	1.30E+05*	1.00E+00	4.10E-04	6.90E-05	5.10E-05	8.50E-06	4.40E-05	2.80E-07	7.30E-07	2.40E-05
RC504	1	8.68E+03	3.20E+09	3.57E+01	3.02E+05	1.30E+05*	1.00E+00	4.10E-04	6.90E-05	5.10E-05	8.50E-06	4.40E-05	2.80E-07	7.30E-07	2.40E-05
RC602	1	8.68E+03	5.03E+08	3.57E+01	2.16E+05	2.88E+05*	9.90E-01	7.70E-04	4.00E-04	1.70E-02	7.40E-06	4.40E-05	2.20E-07	7.00E-07	2.40E-05
RC701	1	4.21E+03	1.36E+07	2.48E+01	1.19E+04	2.41E+04	1.10E-01	4.20E-03	4.40E-03	6.90E-03	6.00E-04	4.80E-03	2.20E-05	1.10E-04	2.70E-03



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 22 of 105

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

Table 2.2.5.3-1 U.S. EPR MACCS2 Plume Data

Release Category	Plume No.	Alarm Initiation (Seconds)	Heat Release Rate (Watts)	Release Height (Meters)	Start Time (Seconds)	Duration (Seconds)	Group No. 1	Group No. 2	Group No. 3	Group No. 4	Group No. 5	Group No. 6	Group No. 7	Group No. 8	Group No. 9
RC702	1	4.21E+03	1.36E+07	2.48E+01	1.19E+04	2.41E+04	1.10E-01	8.40E-02	8.70E-02	1.40E-01	1.20E-02	9.60E-02	4.50E-04	2.20E-03	5.40E-02
RC802	1	2.42E+04	2.36E+08	3.06E+01	2.84E+04	2.02E+04	9.80E-01	7.10E-01	6.90E-01	6.40E-01	1.30E-01	5.70E-01	3.90E-03	2.20E-02	3.80E-01

Notes:

* Per Reference 7.1, Section 5.8, MACCS2 methodology supports modeling of plumes that do not exceed 10 hours (36000 seconds) in duration. Therefore, the plume duration in the input file for the U.S. EPR (Attachment H), for each case identified in the table above, was capped to 36000 seconds.

** The plume data for RC501 and RC503 are equivalent (due to the capping of the plume release duration) to RC404 and RC 502, respectively. Since MACCS2 is unable to model two plumes with equivalent characteristics, the alarm initiation times for RC501 and RC503 were specified as 8.676E+03 seconds (per Attachment A.4 without rounding off) instead of 8.68E+03 seconds.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	23	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

2.3 EARLY Model

- 2.3.1 The number of fine grid subdivisions in the models is set to 7. A higher number of grid subdivisions improves the accuracy and the highest value that can be set in any model is 7.
- 2.3.2 Cloudshine shielding factors for evacuation, normal activity, and sheltering are 1, 0.75, and 0.6, respectively (Reference J, EARLY input file).
- 2.3.3 Inhalation protection factors for evacuation, normal activity, and sheltering are 1, 0.41, and 0.33, respectively (Reference J, EARLY input file).
- 2.3.4 Breathing rates for evacuation, normal activity, and sheltering are 0.000266, 0.000266, and 0.000266 m³/s, respectively (Reference J, EARLY input file).
- 2.3.5 Skin protection factors for evacuation, normal activity, and sheltering are 1, 0.41, and 0.33, respectively (Reference J, EARLY input file).
- 2.3.6 Groundshine shielding factors for evacuation, normal activity, and sheltering are 0.5, 0.33, and 0.2, respectively (Reference J, EARLY input file).
- 2.3.7 Initial value for emergency-phase resuspension concentration factor is 1.0E-04 1/m (Reference J, EARLY input file).
- 2.3.8 The half-life (seconds) of the resuspension concentration coefficient is 1.82E05 seconds (Reference J, EARLY input file).

2.4 CHRONC Model

- 2.4.1 (Emergency Response Cost Data) The daily cost of compensation for evacuees and short-term/intermediate relocatees who are removed from their homes as a result of radiation exposure during the emergency-phase period is 53.19 \$/person-day. This cost includes the food, housing, but not lost income. The value is obtained by multiplying the base 1986 value by the 2009/1986 CPI ratio, 27.00 * 1.97 ≈ 53.19. See Attachment J.
- 2.4.2 (Long Term Protective Action Data) The duration of the intermediate-phase period is 0 seconds (no intermediate phase). See Attachment J.
- 2.4.3 (Long Term Protective Action Data) The long-term dose projection period is 5 years (1.58E8 seconds). See Attachment J.
- 2.4.4 (Long Term Protective Action Data) The intermediate-phase dose criterion is 1.0E5 Sieverts. This is the maximum allowable direct exposure dose commitment to the long-term critical organ during the intermediate-phase period (set at 0 seconds, not used). See Attachment J.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	24	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 2.4.5 (Long Term Protective Action Data) The long-term phase dose criterion is 0.03 Sieverts. This is the maximum allowable direct exposure dose commitment to the long-term critical organ during the long-term phase action period. See Attachment J.
- 2.4.6 (Long Term Protective Action Data) The long-term phase critical organ is the effective whole-body dose equivalent. If the total direct exposure dose commitment to this organ in a grid element would exceed the dose criteria in either the intermediate phase period or the long-term phase period, protective actions would be taken to limit that dose to acceptable levels. See Attachment J.
- 2.4.7 (Long Term Protective Action Data) The duration of the long-term exposure period considered by CHRONC is 50 years (1.58E9 seconds). See Attachment J.
- 2.4.8 (Decontamination Plan Data) There are 2 levels of decontamination. See Attachment J.
- 2.4.9 (Decontamination Plan Data) The decontamination times for the 2 levels of decontamination are 60 days (5.184E6 seconds) and 120 days (1.0368E7 seconds) respectively. See Attachment J.
- 2.4.10 (Decontamination Plan Data) The dose reduction factors for the two levels of decontamination are 3 and 15, respectively. These define the effectiveness of the various decontamination levels in reducing dose. For example, a dose reduction factor of 3 means that the resulting population dose at that location will be reduced to one-third of what it would be without decontamination. See Attachment J.
- 2.4.11 (Decontamination Plan Data) The farmland decontamination costs for the two levels of decontamination are 1109 dollars/hectare and 2463 dollars/hectare, respectively. These values were obtained by multiplying the base 1986 values by the 2009/1986 CPI ratio, 1.97. ($562.5 * 1.97 \approx 1109$, $1250 * 1.97 \approx 2463$). See Attachment J.
- 2.4.12 (Decontamination Plan Data) The nonfarmland decontamination costs for the two levels of decontamination are 5910 dollars/hectare and 15760 dollars/hectare, respectively. These values were obtained by multiplying the base 1986 values by the 2009/1986 CPI ratio, 1.97. ($3000 * 1.97 \approx 5910$, $8000 * 1.97 \approx 15760$). See Attachment J.
- 2.4.13 (Decontamination Plan Data) The fractions of the farmland decontamination cost that are due to labor for the two decontamination levels are 0.3 and 0.35. See Attachment J.
- 2.4.14 (Decontamination Plan Data) The fractions of the nonfarmland decontamination cost that are due to labor for the two decontamination levels are 0.7 and 0.5. See Attachment J.
- 2.4.15 (Decontamination Plan Data) The fractions of the decontamination periods that farmland decontamination worker spends in the contaminated area (for each decontamination level) are 0.10 and 0.33. See Attachment J. See Attachment J.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	25	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 2.4.16 (Decontamination Plan Data) The fractions of the decontamination periods that nonfarmland decontamination worker spends in the contaminated area (for each decontamination level) are 0.33 and 0.33. See Attachment J.
- 2.4.17 (Decontamination Plan Data) The labor cost of a decontamination worker 68950 \$/man-year. The value is obtained by multiplying the base 1986 value by the 2009/1986 CPI ratio, 1.97. ($35000 * 1.97 \approx 68950$). See Attachment J. See Attachment J.
- 2.4.18 (Interdiction Plan Cost Data) The depreciation rate that applies to property improvements during a period of interdiction is 0.20 1/year. This depreciation rate is intended to account for the loss of value of buildings and other structures resulting from a lack of habitation and maintenance. See Attachment J.
- 2.4.19 (Interdiction Plan Cost Data) The expected rate of return from land, buildings, equipment, etc. is 0.07 1/year (real rate adjusted for inflation). See Attachment J.
- 2.4.20 (Interdiction Plan Cost Data) The per capita removal cost for temporary or permanent relocation of population and businesses in a region rendered uninhabitable during the long-term phase time period is 9850 dollars/person. The value is obtained by multiplying the base 1986 value by the 2009/1986 CPI ratio, 1.97. ($5000 * 1.97 \approx 9850$). See Attachment J.
- 2.4.21 (Groundshine Weathering Data) The number of terms in the groundshine weathering relationship is 2. For further discussion see Reference 7.1, Section 7.7.
- 2.4.22 (Groundshine Weathering Data) The coefficients in the groundshine weathering equation are both 0.5. For further discussion see Reference 7.1, Section 7.7.
- 2.4.23 (Groundshine Weathering Data) The first and second half-lives in the groundshine weathering equation are 1.6E7 seconds and 2.8E9 seconds, respectively. For further discussion see Reference 7.1, Section 7.7.
- 2.4.24 (Resuspension Weathering Data) The number of terms in the resuspension weathering relationship is 3. For further discussion see Reference 7.1, Section 7.8.
- 2.4.25 (Resuspension Weathering Data) The first, seconds, and third coefficients in the resuspension weathering equation are 1.0E-5 1/meter, 1.0E-7 1/meter, and 1.0E-9 1/meter, respectively. For further discussion see Reference 7.1, Section 7.8.
- 2.4.26 (Resuspension Weathering Data) The first, second, and third half-lives in the resuspension weathering equation are 1.6E7 seconds, 1.6E8 seconds, and 1.6E9 seconds, respectively. For further discussion see Reference 7.1, Section 7.8.
- 2.4.27 (Regional Characteristics Data) The value of farm wealth in the region is 16636 dollars/hectare. This value was obtained by multiplying the base 2008 value by the 2009/2008 CPI ratio, 1 (no inflation). See Attachment J.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	26	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

2.4.28 (Regional Characteristics Data) The fraction of farm wealth in the region due to improvements is 0.25. This value includes farm buildings, and nonrecoverable machinery, as well as any infrastructure such as silos or irrigation, which is devoted exclusively to the support of farming.

2.4.29 (Regional Characteristics Data) The value of the nonfarm wealth in the region is 275924 dollars/person. This value was obtained by multiplying the base 2008 value by the 2009/2008 CPI ratio, 1 (no inflation). See Attachment J.

2.4.30 (Regional Characteristics Data) The fraction of nonfarm wealth in the region due to improvements is 0.8. This value includes buildings and infrastructure such as roads and utilities, as well as any nonrecoverable equipment or machinery. See Attachment J.

2.4.31 (Food Ingestion Model) The maximum allowable food ingestion doses from milk crops during the year of the accident are 0.0025 Sieverts and 0.025 Sieverts for the effective dose and the thyroid dose, respectively. See Attachment J.

2.4.32 (Food Ingestion Model) The maximum allowable food ingestion doses from nonmilk crops during the year of the accident are 0.0025 Sieverts and 0.025 Sieverts for the effective dose and the thyroid dose, respectively. See Attachment J.

2.4.33 (Food Ingestion Model) The maximum allowable long-term annual doses from ingestion of the combination of milk and nonmilk crops are 0.005 Sieverts and 0.050 Sieverts for the effective dose and the thyroid dose, respectively. See Attachment J.

2.4.34 (Food Ingestion Model) The parameters for the radionuclides utilized for the water ingestion pathway are provided in Table 2.4.34-1. See Attachment J.

Table 2.4.34-1 Water Ingestion Radionuclide Data

Radionuclide Name	Initial Washoff Fraction	Annual Washoff Rate	Water Ingestion Factor
Sr-89	0.01	0.004	5.0E-6
Sr-90	0.01	0.004	5.0E-6
Cs-134	0.005	0.001	5.0E-6
Cs-137	0.005	0.001	5.0E-6



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	27	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

3 ASSUMPTIONS

3.1 GENERAL

3.1.1 Site-specific information used to perform MACCS2 modeling for the Hope Creek Generating Station License Renewal Application, Environmental Report (Reference 7.11), is valid input for this analysis. This assumption is valid because the Hope Creek Generating Station is located on the same site as the new power plant addressed in this analysis.

The MACCS2 site-specific input files (site file and meteorological file) from the environmental report are provided in Attachment J of this document. For this analysis the site file is adjusted with an updated population distribution (See Design Input 2.1.3). The content of the meteorological file is not changed. The meteorological and site files used in this analysis are provided in Attachments C and D, respectively.

3.2 ATMOS Model

3.2.1 (Nuclide Data) It is assumed that the pseudo-stable radionuclides in Table 3.2.1-1 do not affect the results of the MACCS2 simulations in a significant way. That is why these radionuclides are specified in the ATMOS input files to be excluded from the MACCS2 calculations (to reduce the MACCS2 run time). The list in Table 3.2.1-1 is based on a sample model from the MACCS2 Users' Guide (Reference 7.1, Appendix C).

Table 3.2.1-1 List of Pseudo-stable Radionuclides

I-129	Sm-147	Np-237	Zr-93	Tc-99	Pr-144m
Xe-131m	U-234	Rb-87	Nb-93m	Rh-103m	Pm-147
Xe-133m	U-235	Ba-137m	Nb-95m	Rh-106	
Xe-135m	U-236	Rb-88	Nb-97	Te-131	
Cs-135	U-237	Y-91m	Nb-97m	Pr-144	

3.2.2 (Nuclide Data) Nuclides modeled in MACCS2 are based on core fission product inventories for each reactor technology. Only the most significant nuclides (with respect to the expected dose contribution) are considered in the analysis. The list of these nuclides is provided in Table 3.2.2-1. The list of nuclides considered in this analysis is assumed to be valid because it is in agreement with the nuclides used in cases described in NUREG-4551 (Reference 7.3, Appendix A) and in the MACCS2 User's Guide (Reference 7.1, Appendix C).



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	28	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 3.2.2-1 Nuclides Modeled in MACCS2

Co-58	Sr-92	Ru-103	Te-131m	Cs-136	Pr-143
Co-60	Y-90	Ru-105	Te-132	Cs-137	Nd-147
Kr-85	Y-91	Ru-106	I-131	Ba-139	Np-239
Kr-85m	Y-92	Rh-105	I-132	Ba-140	Pu-238
Kr-87	Y-93	Sb-127	I-133	La-140	Pu-239
Kr-88	Zr-95	Sb-129	I-134	La-141	Pu-240
Rb-86	Zr-97	Te-127	I-135	La-142	Pu-241
Sr-89	Nb-95	Te-127m	Xe-133	Ce-141	Am-241
Sr-90	Mo-99	Te-129	Xe-135	Ce-143	Cm-242
Sr-91	Tc-99m	Te-129m	Cs-134	Ce-144	Cm-244

- 3.2.3 (Nuclide Data) It is assumed all chemical groups in Table 2.2.1.1-1 are subject to wet and dry deposition except the noble gasses (Group 1). The reason the noble gasses are assumed not to undergo dry or wet deposition is due to their inert chemical properties. This approach is also used in the example case in MACCS2 User's Guide (Reference 7.1, Appendix C).
- 3.2.4 (Dry Deposition Data) The particle size distribution in the plume is assumed to be uniform, with an average dry deposition velocity of 0.01 meters/second. This assumption is based on input used in models of References 7.3, Appendix A, and 7.1, Appendix C. The nuclides analyzed in these two models are the same as those analyzed in the MACCS2 model here, which supports the approach of this assumption.
- 3.2.5 (Release Data) There are two options in MACCS2 code to consider the release fraction of the ingrowth decay products after the accident initiation. In the first option the release fractions for the ingrowth decay products are defined by the release fraction for the isotope group to which the daughter is assigned. In the second option the release fractions for the ingrowth decay products are set to be proportional to those of the associated parent nuclides. In this analysis the second option was specified in the model because it corresponds to the dose factor file supplied with MACCS2 code. This is assumed to be a valid approach since no significant difference in the results is expected due to the selection of either of the two choices described above (See MACCS2 User's Manual, Reference 7.1).
- 3.2.6 (Release Data) It is assumed the risk-dominant plume for every source is the plume that is released the earliest. This assumption is consistent with sample models in NUREG-4551, Appendix A, (Reference 7.3) and User's Guide, Appendix C, Reference 7.1.
- 3.2.7 (Release Data) It is assumed that the midpoint of the plume is representative of the entire plume. This means that the radioactive decay, dry deposition, and dispersion calculations are all performed as if the contents of the segment plume segment are located at this point.
- 3.2.8 (Boundary Weather Data) Last spatial interval needs to be specified to ensure some default boundary weather data are available if the 120 hr of recorded weather data do not transport the last plume through this last spatial interval. In this analysis the limiting spatial interval is specified as interval



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	29	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

number 10 (corresponds to 50 miles). The default boundary weather data was taken from a sample problem provided in Appendix C of the User's Guide (Reference 7.1). The associated weather data variables and the corresponding values are provided in Section 5.1.1. This assumption is valid since this analysis only considers the 50-mile area around the PSEG Site.

3.2.9 (Meteorological Bin Sampling Data) The parameters associated with the sampling of the meteorological data are based on sample input files provided in the User's Guide, Appendix C, (Reference 7.1). These are user-determined parameters that define the sampling approach (e.g., bin number) of the meteorological data. Two different parameters were specified in the model for the analysis compared to values in Reference 7.1; the endpoints of the rain distance intervals and the number of the rain samples per bin. The selected rain distance intervals are different due to different definition of spatial endpoint distances that is site and problem dependent. Four samples per bin are utilized in Reference 7.3 while twelve samples per bin are used in the model for this analysis. The reason a higher number of samples was specified was to increase the accuracy of the calculation - a higher number of samples increases the accuracy (as well as the run time, which is the reason the number of samples remains limited) of MACCS2.

3.3 EARLY Model

3.3.1 (Miscellaneous Data) The dispersion model utilized in the EARLY analyses is based on the wind-shift dispersion model with rotation. Two other options available are based on straight-line dispersion model and the wind-shift dispersion model without rotation. In wind-shift dispersion model with rotation, each plume segment in the release travels in the direction that the wind is blowing at the time that its representative time point leaves the facility. Each set of modeling results is rotated around the 16 compass directions (population sectors) to yield 16 sets of results for each weather trial. The same model was used in sample cases presented in NUREG-4551, Appendix A (Reference 7.3) and User's Guide, Appendix C (Reference 7.1), and it is assumed the same model can be used in this analysis.

3.3.2 (Evacuation Zone Data) The evacuation speed for all reactor technologies is assumed to be 2.8 m/s (Hope Creek MACCS analysis, Attachment J). Note that this value is also used for the ABWR analysis even though a value of 4.7 m/s was provided by the vendor (Attachment A.1). This value was used because it was the most conservative value available from the reactor data (Attachments A.1 to A.4).

3.4 CHRONC Model

3.4.1 (General) The economic and agricultural parameters from the Hope Creek Environmental Report are assumed to be valid inputs for the CHRONC model of this analysis. The exception to this assumption is the update to the purchasing value of the dollar, which has been scaled to the 2009 level using the relative Consumer Price Index (CPI, See Design Input Section). The Hope Creek Environmental Report CHRONC model (Attachment J) is based on 2002 census of agriculture, and is deemed as an acceptable approximation of the current levels of production.

3.4.2 (Evacuation Zone Data) The duration of the emergency phase period is assumed to be one week. The assumption is based on sample problem in NUREG-4551, Appendix A (Reference 7.3).



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	30	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 3.4.3 (Evacuation Zone Data) Critical organ for relocation decisions during the emergency phase period is assumed to be EDEWBODY (effective whole-body dose equivalent). This assumption is based on sample problem in NUREG-4551, Appendix A (Reference 7.3) and the Hope Creek Environmental Report (Attachment J).
- 3.4.4 (Evacuation Zone Data) The hot-spot relocation action time is assumed to be equal to one-half of a day (43200 seconds). This assumption is based on sample problem in NUREG-4551, Appendix A (Reference 7.3) and the Hope Creek Environmental Report (Attachment J).
- 3.4.5 (Evacuation Zone Data) The normal relocation action time is assumed to be equal to one day (86400 seconds). This assumption is based on sample problem in NUREG-4551, Appendix A (Reference 7.3).
- 3.4.6 (Evacuation Zone Data) The hot-spot dose threshold is assumed to be equal to 0.01 Sieverts. This assumption is based on the Hope Creek Environmental Report (Attachment J).
- 3.4.7 (Evacuation Zone Data) The normal relocation dose threshold is assumed to be equal to 0.01 Sieverts. The assumption is based on the Hope Creek Environmental Report (Attachment J).
- 3.4.8 (Early Fatality Data) Three organs are assumed to contribute to the early fatality risk. These are red marrow, lungs, and lower large intestine. The parameters needed to model the fatality risk due to these organs are provided in Table 3.4.8-1. This assumption is based on the Hope Creek Environmental Report (Attachment J).

Table 3.4.8-1 Early Fatality Data for Red Marrow, Lungs, and Lower large Intestine

Organ	Alpha Factor	Beta Factor	Threshold Dose
Red Marrow	3.8	5.0	1.5
Lungs	10.0	7.0	5.0
Lower Large Intestine	15.0	10.0	8.0

- 3.4.9 (Latent Cancer Data) Seven types of latent cancer are assumed to contribute to the latent cancer risk. These cancers are associated with seven predefined (see organ definition data) organs (red bone marrow, bone surface, breast, lungs, thyroid, lower large intestine, effective whole-body dose equivalent). The parameters needed to model the latent cancer risk due to these organs are provided in Table 3.4.9-1. This assumption is based on the Hope Creek Environmental Report (Attachment J).



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	31	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 3.4.9-1 Latent Cancer Modeling Parameters

Organ	Population Fraction that is Susceptible	Alpha Factor	Beta Factor	Lifetime Risk Factor for Cancer Death.	Lifetime Risk Factor for Cancer injury.	Dose-Dependent Reduction Factor
Red Bone Marrow	1.0	1.0	0	9.70E-3	0	2
Bone Surface	1.0	1.0	0	1.20E-4	0	2
Breast	1.0	1.0	0	5.40E-3	1.7E-2	1
Lungs	1.0	1.0	0	1.55E-2	0	2
Thyroid	1.0	1.0	0	7.20E-4	7.2E-3	1
Lower Large Intestine	1.0	1.0	0	3.36E-2	0	2
Effective Whole-body Dose Equivalent	1.0	1.0	0	2.76E-2	0	2



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	32	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

4 METHODOLOGY AND ACCEPTANCE CRITERIA

4.1 Methodology

The methodology of this analysis to model the environmental consequences of the severe accidents is based on the MACCS2 software package. MACCS2 is a Gaussian plume application for calculation of radiological atmospheric dispersion and consequences. MACCS2 simulates the impact of accidental atmospheric releases of radiological materials on the surrounding environment. The principal phenomena considered in MACCS2 are atmospheric transport, mitigative actions based on dose projection, dose accumulation by a number of pathways, early and latent health effects, and economic costs. The exposure pathways modeled in this analysis include external exposure to the passing plume, external exposure to material deposited on the ground, inhalation of material in the passing plume or resuspended from the ground, and ingestion of contaminated food and surface water.

A MACCS2 calculation consists of three phases: input processing and validation, phenomenological modeling and output processing. The phenomenological models are based mostly on empirical data, and the solutions they entail are usually analytical in nature and computationally straightforward. The modeling phase is subdivided into three modules: ATMOS, EARLY, and CHRONC. ATMOS treats atmospheric transport and dispersion of material and its deposition from the air utilizing a Gaussian plume model with Pasquill-Gifford dispersion parameters. EARLY models consequences of the accident to the surrounding area during an emergency action period. CHRONC considers the long term impact in the period subsequent to the emergency action period. Detailed meteorological, population, and economic and health data were provided as input data for the analysis in this document.

The following input files below define the parameters of this analysis:

- ATMOS input (atmospheric transport, dispersion, and deposition parameters). A unique ATMOS file was created for each reactor technology analysis.
- EARLY input (parameters pertaining to the emergency phase, including mitigative actions such as evacuation, sheltering, and dose-dependent relocation). A single EARLY file was created for all reactor technology analyses.
- CHRONC input (parameters pertaining to the intermediate and long-term phases). A single CHRONC file was created for all reactor technology analyses.

The following auxiliary files are used in the analysis:

- Maccs2.tmp is a text file containing the paths and names for the MACCS2 input files.
- Indexr.DAT is an ASCII file containing decay-chain information. This file is included as part of the installation.

The following files contain site-specific data utilized in this analysis:

- Meteorological file describing weather conditions for one year (year 2004, data for one year that includes wind velocity (speed and direction), stability class, and rainfall).
- Site file describing population, land use, and economic parameters.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	33	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- Dose conversion factor (DCF) file used to calculate the health effects from various radionuclide exposures for each pathway (supplied with software).
- Comida2 binary file, created by COMIDA2.exe, is used to define food-chain doses (supplied with software).

The results of the MACCS2 calculations (mean values) and accident frequency information were used to determine risk. The sum of all release category frequencies is the core damage frequency and includes internal and external initiating events. External events include internal fire events and internal flood events. Risk is the set of accident sequences, their respective frequencies and their respective consequences. Risk is often more simply quantified as the sum of the products of accident sequence frequencies and consequences. For example, the consequence can be radiation dose. Therefore, the associated risk for this consequence is reported as a combination of person-rem per reactor per year. Note that in case of multiple reactors, the risk for the single reactor is multiplied by the total number of reactors to obtain the total risk.

Per Reference 7.10, MACCS2 has been validated in accordance with the S&L Quality Assurance (QA) Program. Therefore, the validation documentation is not required in this calculation. The program was executed on PC No. ZL4848 and the associated program files are listed in Attachment B.

4.2 Acceptance Criteria

None.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	34	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

5 CALCULATIONS

5.1 MACCS2 Input Parameters

All calculations in this analysis are performed within the MACCS2 program. Values assigned to the parameters of the main MACCS2 input files (ATMOS, EARLY, and CHRONC) for each reactor technology are summarized in this section. The meteorology and the site files are discussed in detail in the associated source documentation, and are not further described in this analysis.

5.1.1 ATMOS Input Parameters (Separate Input Files Specification for Each Reactor Technology)

5.1.1.1 ABWR (Attachments E.1 and E.4)

Note that the ABWR analysis consists of two cases corresponding to two different reactor power levels (4005 MWt and 4300 MWt). The ATMOS input file in Attachment E.1 is based on the power level of 4005 MWt, and Attachment E.4 is based on the power level of 4300 MWt. The only difference between these two input files is the variable RDCORSCA001, which is assigned the associated power level for each case. Therefore, only the input data from Attachment E.1 is described in detail in Table 5.1.1.1-1.

Table 5.1.1.1-1 ABWR ATMOS Input Parameter Specification

Variable Name	Value	Description
Run Identification (RI) Data		
RIATNAM1001	ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS	The title of the ATMOS input file.
Geometry (GE) Data		
GENUMRAD001	10	Number of radial spatial elements defined in the model.
GESPAEND001	1.61, 3.22, 4.83, 6.44, 8.05	Distances to endpoints of spatial intervals in kilometers (first set). Note that these values correspond to those provided for the site input file provided in Attachment D.
GESPAEND002	16.1, 32.2, 48.3, 64.4, 80.5	Distances to endpoints of spatial intervals in kilometers (second set). Note that these values correspond to those provided for the site input file provided in Attachment D.
Radionuclide (RI) Data		
ISNUMSTB001	27	Number of pseudo-stable nuclides defined in the model.
ISNAMSTB001	I-129	Pseudostable radionuclide: daughter of Te-129 and Te-129m.
ISNAMSTB002	Xe-131m	Pseudostable radionuclide: daughter of I-131.
ISNAMSTB003	Xe-133m	Pseudostable radionuclide: daughter of I-133.
ISNAMSTB004	Xe-135m	Pseudostable radionuclide: daughter of I-135.
ISNAMSTB005	Cs-135	Pseudostable radionuclide: daughter of Xe-135 and Xe-135m.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	35	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.1-1 ABWR ATMOS Input Parameter Specification

Variable Name	Value		Description
ISNAMSTB006	Sm-147		Pseudostable radionuclide: daughter of Pm-147.
ISNAMSTB007	U-234		Pseudostable radionuclide: daughter of Pu-238.
ISNAMSTB008	U-235		Pseudostable radionuclide: daughter of Pu-239.
ISNAMSTB009	U-236		Pseudostable radionuclide: daughter of Pu-240.
ISNAMSTB010	U-237		Pseudostable radionuclide: daughter of Pu-241.
ISNAMSTB011	Np-237		Pseudostable radionuclide: daughter of Am-241.
ISNAMSTB012	Rb-87		Pseudostable radionuclide: daughter of Kr-87.
ISNAMSTB013	Ba-137m		Pseudostable radionuclide: daughter of Cs-137.
ISNAMSTB014	Rb-88		Pseudostable radionuclide: daughter of Kr-88.
ISNAMSTB015	Y-91m		Pseudostable radionuclide: daughter of Sr-91.
ISNAMSTB016	Zr-93		Pseudostable radionuclide: daughter of Y-93.
ISNAMSTB017	Nb-93m		Pseudostable radionuclide: daughter of Zr-93.
ISNAMSTB018	Nb-95m		Pseudostable radionuclide: daughter of Zr-95.
ISNAMSTB019	Nb-97		Pseudostable radionuclide: daughter of Zr-97 and Nb-97m.
ISNAMSTB020	Nb-97m		Pseudostable radionuclide: daughter of Zr-97.
ISNAMSTB021	Tc-99		Pseudostable radionuclide: daughter of Mo-99.
ISNAMSTB022	Rh-103m		Pseudostable radionuclide: daughter of Ru-103.
ISNAMSTB023	Rh-106		Pseudostable radionuclide: daughter of Ru-106.
ISNAMSTB024	Te-131		Pseudostable radionuclide: daughter of Te-131m.
ISNAMSTB025	Pr-144		Pseudostable radionuclide: daughter of Ce-144 and Pr-144m.
ISNAMSTB026	Pr-144m		Pseudostable radionuclide: daughter of Ce-144.
ISNAMSTB027	Pm-147		Pseudostable radionuclide: daughter of Nd-147.
ISNUMISO001	60		Number of radioactive nuclides defined in the model.
ISMAXGRP001	7		Number of chemical element groups defined in the model. See Section 2.2.1.1 for information on each chemical group.
	Wet Deposition	Dry Deposition	
ISDEPFLA001	FALSE	FALSE	Logical flag for chemical group one that indicates whether it is subject to wet/dry deposition.
ISDEPFLA002	TRUE	TRUE	Logical flag for chemical group two (Iodine) that indicates whether it is subject to wet/dry deposition.
ISDEPFLA003	TRUE	TRUE	Logical flag for chemical group three that indicates whether it is subject to wet/dry deposition.
ISDEPFLA004	TRUE	TRUE	Logical flag for chemical group four that indicates whether it is subject to wet/dry deposition.
ISDEPFLA005	TRUE	TRUE	Logical flag for chemical group five that indicates whether it is subject to wet/dry deposition.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	36	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.1-1 ABWR ATMOS Input Parameter Specification

Variable Name	Value		Description
ISDEPFLA006	TRUE	TRUE	Logical flag for chemical group six that indicates whether it is subject to wet/dry deposition.
ISDEPFLA007	TRUE	TRUE	Logical flag for chemical group seven that indicates whether it is subject to wet/dry deposition.
	Nuclide	Group	
ISOTPGRP001	Co-58	6	Radionuclide group assignment.
ISOTPGRP002	Co-60	6	Radionuclide group assignment.
ISOTPGRP003	Kr-85	1	Radionuclide group assignment.
ISOTPGRP004	Kr-85m	1	Radionuclide group assignment.
ISOTPGRP005	Kr-87	1	Radionuclide group assignment.
ISOTPGRP006	Kr-88	1	Radionuclide group assignment.
ISOTPGRP007	Rb-86	3	Radionuclide group assignment.
ISOTPGRP008	Sr-89	5	Radionuclide group assignment.
ISOTPGRP009	Sr-90	5	Radionuclide group assignment.
ISOTPGRP010	Sr-91	5	Radionuclide group assignment.
ISOTPGRP011	Sr-92	5	Radionuclide group assignment.
ISOTPGRP012	Y-90	7	Radionuclide group assignment.
ISOTPGRP013	Y-91	7	Radionuclide group assignment.
ISOTPGRP014	Y-92	7	Radionuclide group assignment.
ISOTPGRP015	Y-93	7	Radionuclide group assignment.
ISOTPGRP016	Zr-95	7	Radionuclide group assignment.
ISOTPGRP017	Zr-97	7	Radionuclide group assignment.
ISOTPGRP018	Nb-95	7	Radionuclide group assignment.
ISOTPGRP019	Mo-99	6	Radionuclide group assignment.
ISOTPGRP020	Tc-99m	6	Radionuclide group assignment.
ISOTPGRP021	Ru-103	6	Radionuclide group assignment.
ISOTPGRP022	Ru-105	6	Radionuclide group assignment.
ISOTPGRP023	Ru-106	6	Radionuclide group assignment.
ISOTPGRP024	Rh-105	6	Radionuclide group assignment.
ISOTPGRP025	Sb-127	4	Radionuclide group assignment.
ISOTPGRP026	Sb-129	4	Radionuclide group assignment.
ISOTPGRP027	Te-127	4	Radionuclide group assignment.
ISOTPGRP028	Te-127m	4	Radionuclide group assignment.
ISOTPGRP029	Te-129	4	Radionuclide group assignment.
ISOTPGRP030	Te-129m	4	Radionuclide group assignment.
ISOTPGRP031	Te-131m	4	Radionuclide group assignment.
ISOTPGRP032	Te-132	4	Radionuclide group assignment.
ISOTPGRP033	I-131	2	Radionuclide group assignment.
ISOTPGRP034	I-132	2	Radionuclide group assignment.
ISOTPGRP035	I-133	2	Radionuclide group assignment.
ISOTPGRP036	I-134	2	Radionuclide group assignment.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	37	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.1-1 ABWR ATMOS Input Parameter Specification

Variable Name	Value		Description
ISOTPGRP037	I-135	2	Radionuclide group assignment.
ISOTPGRP038	Xe-133	1	Radionuclide group assignment.
ISOTPGRP039	Xe-135	1	Radionuclide group assignment.
ISOTPGRP040	Cs-134	3	Radionuclide group assignment.
ISOTPGRP041	Cs-136	3	Radionuclide group assignment.
ISOTPGRP042	Cs-137	3	Radionuclide group assignment.
ISOTPGRP043	Ba-139	5	Radionuclide group assignment.
ISOTPGRP044	Ba-140	5	Radionuclide group assignment.
ISOTPGRP045	La-140	7	Radionuclide group assignment.
ISOTPGRP046	La-141	7	Radionuclide group assignment.
ISOTPGRP047	La-142	7	Radionuclide group assignment.
ISOTPGRP048	Ce-141	7	Radionuclide group assignment.
ISOTPGRP049	Ce-143	7	Radionuclide group assignment.
ISOTPGRP050	Ce-144	7	Radionuclide group assignment.
ISOTPGRP051	Pr-143	7	Radionuclide group assignment.
ISOTPGRP052	Nd-147	7	Radionuclide group assignment.
ISOTPGRP053	Np-239	7	Radionuclide group assignment.
ISOTPGRP054	Pu-238	7	Radionuclide group assignment.
ISOTPGRP055	Pu-239	7	Radionuclide group assignment.
ISOTPGRP056	Pu-240	7	Radionuclide group assignment.
ISOTPGRP057	Pu-241	7	Radionuclide group assignment.
ISOTPGRP058	Am-241	7	Radionuclide group assignment.
ISOTPGRP059	Cm-242	7	Radionuclide group assignment.
ISOTPGRP060	Cm-244	7	Radionuclide group assignment.
Wet Deposition (WD) Data			
WDCWASH100 1	9.5E-5		The linear term of the washout function.
WDCWASH200 1	0.8		The exponential term of the washout function.
Dry Deposition (DD) Data			
DDNPSGRP001	1		Number of particle size groups.
DDVDEPOS001	0.01		The representative dry deposition velocity of the particle size group.
Dispersion Parameter (DP) Data			
NUM_DIST001	0		The Gaussian plume model of atmospheric dispersion uses spatially dependent dispersion parameters. A value of 0 for this variable specifies that dispersion parameters are approximated by power-law functions.
DPCYSIGA001	0.3658, 0.2751, 0.2089, 0.1474, 0.1046, 0.0722		Six linear terms for σ_y .



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	38	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.1-1 ABWR ATMOS Input Parameter Specification

Variable Name	Value	Description
DPCYSIGB001	0.9031, 0.9031, 0.9031, 0.9031, 0.9031, 0.9031	Six exponential terms for σ_y .
DPCZSIGA001	2.5E-4, 1.9E-3, 0.2, 0.3, 0.4, 0.2	Six linear terms for σ_z .
DPCZSIGB001	2.125, 1.6021, 0.8543, 0.6532, 0.6021, 0.6020	Six exponential terms for σ_z .
DPYSCALE001	1.0	Linear scaling factor for σ_y factors.
DPZSCALE001	1.27	Linear scaling factor for σ_z factors.
Plume Meander (PM) Data		
PMTIMBAS001	600.0	The time base associated with the parameterization of the plume meander adjustment factor (seconds).
PMBRKPNT001	3600.0	The time breakpoint in the formula used to calculate the plume meander expansion factor (seconds).
PMXPFAC1001	0.2	The exponential factor used in calculating the plume meander expansion factor for releases having durations that are less than or equal to PMBRKPNT001.
PMXPFAC2001	0.25	The exponential factor used in calculating the plume meander expansion factor for releases having durations that are greater than PMBRKPNT001.
Plume Rise (PR) Data		
PRSCLCRW001	1.0	Linear scaling factor on the critical wind speed used in determining if buoyant plumes will be trapped in the turbulent wake of the facility building complex. This functionality is not utilized in this analysis (scaling factor set to 1).
PRSCLDAP001	1.0	Linear scaling factor on the plume rise formula used to determine the amount of plume rise that will occur when unstable or neutral atmospheric conditions occur (classes A through D). This functionality is not utilized in this analysis (scaling factor set to 1).
PRSCLEFP001	1.0	Linear scaling factor on the plume rise formula used to determine the amount of plume rise that will occur when atmospheric conditions are stable (classes E and F). This functionality is not utilized in this analysis (scaling factor set to 1).
Wake Effects (WE) Data		
SIGYINIT001	12.6	Initial σ_y value.
SIGZINIT001	17.5	Initial σ_z value.
WEBUILDH001	37.7	Building height (meters).



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	39	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.1-1 ABWR ATMOS Input Parameter Specification

Variable Name	Value	Description
Release Data (RD) (Part 1 of 2)		
RDPSDIST001 to RDPSDIST007	1.0	Fraction (s) of the released material allocated to each of the particle size (deposition velocity) bins. This model utilizes a single deposition velocity, which implies a uniform particle distribution for all chemical groups (7).
RDCORINV001 to RDCORINV060	See Attachment E.1	Core inventory as a function of radionuclide and activity. The activity is provided in units of Bq/MWt. The software requires units of Bq. The unit conversion is done utilizing a power level (in MWt) and assigning it to variable RDCORSCA001.
RDCORSCA001	4005.0	Unit conversion factor for radionuclides identified in the core inventory. The activity is changed from Ci to Bq units. Note that the ABWR analysis consists of two cases corresponding to two different power levels. The ATMOS input file in Attachment E.4 is based on the power level of 4300 MWt. For the case corresponding to Attachment E.4, the RDCORSCA001 variable is assigned a value of 4300.0.
RDAPLFRC001	PARENT	A variable that specifies that the daughter ingrowth products are released in fractions proportional to the release fraction of the parent.
Output Control (UC) Data		
OCENDAT1001	FALSE	Boolean flag to indicate that this is not the last program in the series to be run (EARLY and CHRONC are to be run after ATMOS in this analysis).
OCIDEBUG001	0	A value of 0 is specified for this variable to specify no debug output is to be printed.
TYPE0NUMBE R	0	A value of 0 is specified for this variable to specify no atmospheric results are to be printed.
Meteorological Specifications		
Meteorological Sampling (M1) Data		
M1METCOD001	2	This variable controls the specification of the weather data used by the ATMOS file. A value of 2 indicates that the weather bin sampling method is used with a separate file (See Attachment C) of hourly weather data covering a period of 1 year (8760 hr).
Boundary Weather (M2) Data		



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	40	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.1-1 ABWR ATMOS Input Parameter Specification

Variable Name	Value	Description
M2LIMSPA001	10	Last spatial interval boundary (interval boundary 10, or 50 miles in this analysis) for measured weather. Beyond 50 miles (if the 120 hr of recorded weather data do not transport the last plume through the 50 mile distance) weather data is determined by variables in the M2 section.
M2BNDMXH001	1000.0	Boundary weather mixing layer height (meters).
M2IBDSTB001	4	Boundary weather stability class index (D-Stability).
M2BNDRAN001	5.0	Boundary weather rain rate (mm/hr).
M2BNDWND001	5.0	Boundary weather wind speed (m/s).
Meteorological Bin Sampling (M4) Data		
M4NRNINT001	5	Number of rain distance intervals for binning.
M4RNDSTS001	3.22, 8.05, 16.1, 48.3, 80.5	Endpoints of the rain distance intervals (kilometers). These values must be selected from the spatial endpoint distances assigned to variables GESPAEND001 and GESPAEND002. The five values correspond to distances of 2.0, 5.0, 10.0, 30.0, and 50.0 miles, respectively.
M4NRINTN001	3	Number of rain intensity breakpoints.
M4RNRATE001	2.0, 4.0, 6.0	Rain intensity breakpoints for weather binning (millimeters/hour).
M4NSMPLS001	12	Number of samples per bin.
M4IRSEED001	79	Initial seed for random number generator.
Release Data (RD) (Part 2 of 2)		
RDATNAM2001	NCL	Descriptive text describing this particular source.
RDOALARM001	6.12E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	1.38E+06	Heat release rate (Watts).
RDPLHITE001	37.0	Release height for the plume (meters).
RDPLUDUR001	3.60E+04	Duration of the plume (seconds).
RDPDELAY001	9.72E+03	Time of release for the plume (seconds after scram).
RDRELFRC001	4.40E-02, 0.00E+00, 2.30E-05, 2.30E-05, 0.00E+00, 0.00E+00, 0.00E+00	Plume release fraction for each of the 7 chemical groups.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	41	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.1-1 ABWR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDATNAM2001	Case 1	Descriptive text describing this particular source.
RDOALARM001	6.91E+04	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	1.38E+06	Heat release rate (Watts).
RDPLHITE001	37.0	Release height for the plume (meters).
RDPLUDUR001	3.60E+03	Duration of the plume (seconds).
RDPDELAY001	7.20E+04	Time of release for the plume (seconds after scram).
RDRELFRC001	1.00E+00, 0.00E+00, 1.50E-07, 1.30E-05, 0.00E+00, 0.00E+00, 0.00E+00	Plume release fraction for each of the 7 chemical groups.
RDATNAM2001	Case 2	Descriptive text describing this particular source.
RDOALARM001	6.55E+04	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	1.38E+06	Heat release rate (Watts).
RDPLHITE001	37.0	Release height for the plume (meters).
RDPLUDUR001	3.60E+03	Duration of the plume (seconds).
RDPDELAY001	6.84E+04	Time of release for the plume (seconds after scram).
RDRELFRC001	1.00E+00, 0.00E+00, 5.00E-06, 5.00E-06, 0.00E+00, 0.00E+00, 0.00E+00	Plume release fraction for each of the 7 chemical groups.
RDATNAM2001	Case 3	Descriptive text describing this particular source.
RDOALARM001	1.77E+05	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	1.38E+06	Heat release rate (Watts).



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	42	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.1-1 ABWR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDPLHITE001	37.0	Release height for the plume (meters).
RDPLUDUR001	3.60E+04	Duration of the plume (seconds).
RDPDELAY001	1.80E+05	Time of release for the plume (seconds after scram).
RDRELFRC001	1.00E+00, 0.00E+00, 2.80E-04, 2.20E-03, 0.00E+00, 0.00E+00, 0.00E+00	Plume release fraction for each of the 7 chemical groups.
RDATNAM2001	Case 4	Descriptive text describing this particular source.
RDOALARM001	6.91E+04	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	1.38E+06	Heat release rate (Watts).
RDPLHITE001	37.0	Release height for the plume (meters).
RDPLUDUR001	3.60E+03	Duration of the plume (seconds).
RDPDELAY001	7.20E+04	Time of release for the plume (seconds after scram).
RDRELFRC001	1.00E+00, 0.00E+00, 1.60E-03, 1.60E-03, 0.00E+00, 0.00E+00, 0.00E+00	Plume release fraction for each of the 7 chemical groups.
RDATNAM2001	Case 5	Descriptive text describing this particular source.
RDOALARM001	6.55E+04	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	1.38E+06	Heat release rate (Watts).
RDPLHITE001	37.0	Release height for the plume (meters).
RDPLUDUR001	3.60E+03	Duration of the plume (seconds).
RDPDELAY001	6.84E+04	Time of release for the plume (seconds after scram).
RDRELFRC001	1.00E+00, 0.00E+00, 6.00E-03, 5.30E-04, 0.00E+00, 0.00E+00, 0.00E+00	Plume release fraction for each of the 7 chemical groups.
RDATNAM2001	Case 6	Descriptive text describing this particular source.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	43	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.1-1 ABWR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDOALARM001	6.55E+04	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	1.38E+06	Heat release rate (Watts).
RDPLHITE001	37.0	Release height for the plume (meters).
RDPLUDUR001	3.60E+04	Duration of the plume (seconds).
RDPDELAY001	6.84E+04	Time of release for the plume (seconds after scram).
RDRELFRC001	1.00E+00, 0.00E+00, 3.10E-02, 7.70E-02, 0.00E+00, 0.00E+00, 0.00E+00	Plume release fraction for each of the 7 chemical groups.
RDATNAM2001	Case 7	Descriptive text describing this particular source.
RDOALARM001	6.91E+04	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	1.38E+06	Heat release rate (Watts).
RDPLHITE001	37.0	Release height for the plume (meters).
RDPLUDUR001	3.60E+04	Duration of the plume (seconds).
RDPDELAY001	7.20E+04	Time of release for the plume (seconds after scram).
RDRELFRC001	1.00E+00, 0.00E+00, 8.90E-02, 9.90E-02, 0.00E+00, 0.00E+00, 0.00E+00,	Plume release fraction for each of the 7 chemical groups.
RDATNAM2001	Case 8	Descriptive text describing this particular source.
RDOALARM001	4.32E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	4.18E+06	Heat release rate (Watts).
RDPLHITE001	37.0	Release height for the plume (meters).



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	44	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.1-1 ABWR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDPLUDUR001	3.60E+04	Duration of the plume (seconds).
RDPDELAY001	7.20E+03	Time of release for the plume (seconds after scram).
RDRELFRC001	1.00E+00, 0.00E+00, 1.90E-01, 2.50E-01, 0.00E+00, 0.00E+00, 0.00E+00	Plume release fraction for each of the 7 chemical groups.
RDATNAM2001	Case 9	Descriptive text describing this particular source.
RDOALARM001	4.39E+04	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	1.38E+06	Heat release rate (Watts).
RDPLHITE001	37.0	Release height for the plume (meters).
RDPLUDUR001	3.60E+04	Duration of the plume (seconds).
RDPDELAY001	8.50E+04	Time of release for the plume (seconds after scram).
RDRELFRC001	1.00E+00, 0.00E+00, 3.70E-01, 3.60E-01, 0.00E+00, 0.00E+00, 0.00E+00	Plume release fraction for each of the 7 chemical groups.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	45	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

5.1.1.2 AP1000 (Attachment F)

Table 5.1.1.2-1 AP1000 ATMOS Input Parameter Specification

Variable Name	Value	Description
Run Identification (RI) Data		
RIATNAM1001	AP1000 ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS	The title of the ATMOS input file.
Geometry (GE) Data		
GENUMRAD001	10	Number of radial spatial elements defined in the model.
GESPAEND001	1.61, 3.22, 4.83, 6.44, 8.05	Distances to endpoints of spatial intervals in kilometers (first set). Note that these values correspond to those provided for the site input file provided in Attachment D.
GESPAEND002	16.1, 32.2, 48.3, 64.4, 80.5	Distances to endpoints of spatial intervals in kilometers (second set). Note that these values correspond to those provided for the site input file provided in Attachment D.
Radionuclide (RI) Data		
ISNUMSTB001	27	Number of pseudo-stable nuclides defined in the model.
ISNAMSTB001	I-129	Pseudostable radionuclide: daughter of Te-129 and Te-129m.
ISNAMSTB002	Xe-131m	Pseudostable radionuclide: daughter of I-131.
ISNAMSTB003	Xe-133m	Pseudostable radionuclide: daughter of I-133.
ISNAMSTB004	Xe-135m	Pseudostable radionuclide: daughter of I-135.
ISNAMSTB005	Cs-135	Pseudostable radionuclide: daughter of Xe-135 and Xe-135m.
ISNAMSTB006	Sm-147	Pseudostable radionuclide: daughter of Pm-147.
ISNAMSTB007	U-234	Pseudostable radionuclide: daughter of Pu-238.
ISNAMSTB008	U-235	Pseudostable radionuclide: daughter of Pu-239.
ISNAMSTB009	U-236	Pseudostable radionuclide: daughter of Pu-240.
ISNAMSTB010	U-237	Pseudostable radionuclide: daughter of Pu-241.
ISNAMSTB011	Np-237	Pseudostable radionuclide: daughter of Am-241.
ISNAMSTB012	Rb-87	Pseudostable radionuclide: daughter of Kr-87.
ISNAMSTB013	Ba-137m	Pseudostable radionuclide: daughter of Cs-137.
ISNAMSTB014	Rb-88	Pseudostable radionuclide: daughter of Kr-88.
ISNAMSTB015	Y-91m	Pseudostable radionuclide: daughter of Sr-91.
ISNAMSTB016	Zr-93	Pseudostable radionuclide: daughter of Y-93.
ISNAMSTB017	Nb-93m	Pseudostable radionuclide: daughter of Zr-93.
ISNAMSTB018	Nb-95m	Pseudostable radionuclide: daughter of Zr-95.
ISNAMSTB019	Nb-97	Pseudostable radionuclide: daughter of Zr-97 and Nb-97m.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	46	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.2-1 AP1000 ATMOS Input Parameter Specification

Variable Name	Value		Description
ISNAMSTB020	Nb-97m		Pseudostable radionuclide: daughter of Zr-97.
ISNAMSTB021	Tc-99		Pseudostable radionuclide: daughter of Mo-99.
ISNAMSTB022	Rh-103m		Pseudostable radionuclide: daughter of Ru-103.
ISNAMSTB023	Rh-106		Pseudostable radionuclide: daughter of Ru-106.
ISNAMSTB024	Te-131		Pseudostable radionuclide: daughter of Te-131m.
ISNAMSTB025	Pr-144		Pseudostable radionuclide: daughter of Ce-144 and Pr-144m.
ISNAMSTB026	Pr-144m		Pseudostable radionuclide: daughter of Ce-144.
ISNAMSTB027	Pm-147		Pseudostable radionuclide: daughter of Nd-147.
ISNUMISO001	60		Number of radioactive nuclides defined in the model.
ISMAXGRP001	9		Number of chemical element groups defined in the model. See Section 2.2.1.1 for information on each chemical group.
	Wet Deposition	Dry Deposition	
ISDEPFLA001	FALSE	FALSE	Logical flag for chemical group one that indicates whether it is subject to wet/dry deposition.
ISDEPFLA002	TRUE	TRUE	Logical flag for chemical group two (Iodine) that indicates whether it is subject to wet/dry deposition.
ISDEPFLA003	TRUE	TRUE	Logical flag for chemical group three that indicates whether it is subject to wet/dry deposition.
ISDEPFLA004	TRUE	TRUE	Logical flag for chemical group four that indicates whether it is subject to wet/dry deposition.
ISDEPFLA005	TRUE	TRUE	Logical flag for chemical group five that indicates whether it is subject to wet/dry deposition.
ISDEPFLA006	TRUE	TRUE	Logical flag for chemical group six that indicates whether it is subject to wet/dry deposition.
ISDEPFLA007	TRUE	TRUE	Logical flag for chemical group seven that indicates whether it is subject to wet/dry deposition.
ISDEPFLA008	TRUE	TRUE	Logical flag for chemical group eight that indicates whether it is subject to wet/dry deposition.
ISDEPFLA009	TRUE	TRUE	Logical flag for chemical group nine that indicates whether it is subject to wet/dry deposition.
	Nuclide	Group	
ISOTPGRP001	Co-58	6	Radionuclide group assignment.
ISOTPGRP002	Co-60	6	Radionuclide group assignment.
ISOTPGRP003	Kr-85	1	Radionuclide group assignment.
ISOTPGRP004	Kr-85m	1	Radionuclide group assignment.
ISOTPGRP005	Kr-87	1	Radionuclide group assignment.
ISOTPGRP006	Kr-88	1	Radionuclide group assignment.
ISOTPGRP007	Rb-86	3	Radionuclide group assignment.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	47	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.2-1 AP1000 ATMOS Input Parameter Specification

Variable Name	Value		Description
ISOTPGRP008	Sr-89	5	Radionuclide group assignment.
ISOTPGRP009	Sr-90	5	Radionuclide group assignment.
ISOTPGRP010	Sr-91	5	Radionuclide group assignment.
ISOTPGRP011	Sr-92	5	Radionuclide group assignment.
ISOTPGRP012	Y-90	7	Radionuclide group assignment.
ISOTPGRP013	Y-91	7	Radionuclide group assignment.
ISOTPGRP014	Y-92	7	Radionuclide group assignment.
ISOTPGRP015	Y-93	7	Radionuclide group assignment.
ISOTPGRP016	Zr-95	7	Radionuclide group assignment.
ISOTPGRP017	Zr-97	7	Radionuclide group assignment.
ISOTPGRP018	Nb-95	7	Radionuclide group assignment.
ISOTPGRP019	Mo-99	6	Radionuclide group assignment.
ISOTPGRP020	Tc-99m	6	Radionuclide group assignment.
ISOTPGRP021	Ru-103	6	Radionuclide group assignment.
ISOTPGRP022	Ru-105	6	Radionuclide group assignment.
ISOTPGRP023	Ru-106	6	Radionuclide group assignment.
ISOTPGRP024	Rh-105	6	Radionuclide group assignment.
ISOTPGRP025	Sb-127	4	Radionuclide group assignment.
ISOTPGRP026	Sb-129	4	Radionuclide group assignment.
ISOTPGRP027	Te-127	4	Radionuclide group assignment.
ISOTPGRP028	Te-127m	4	Radionuclide group assignment.
ISOTPGRP029	Te-129	4	Radionuclide group assignment.
ISOTPGRP030	Te-129m	4	Radionuclide group assignment.
ISOTPGRP031	Te-131m	4	Radionuclide group assignment.
ISOTPGRP032	Te-132	4	Radionuclide group assignment.
ISOTPGRP033	I-131	2	Radionuclide group assignment.
ISOTPGRP034	I-132	2	Radionuclide group assignment.
ISOTPGRP035	I-133	2	Radionuclide group assignment.
ISOTPGRP036	I-134	2	Radionuclide group assignment.
ISOTPGRP037	I-135	2	Radionuclide group assignment.
ISOTPGRP038	Xe-133	1	Radionuclide group assignment.
ISOTPGRP039	Xe-135	1	Radionuclide group assignment.
ISOTPGRP040	Cs-134	3	Radionuclide group assignment.
ISOTPGRP041	Cs-136	3	Radionuclide group assignment.
ISOTPGRP042	Cs-137	3	Radionuclide group assignment.
ISOTPGRP043	Ba-139	9	Radionuclide group assignment.
ISOTPGRP044	Ba-140	9	Radionuclide group assignment.
ISOTPGRP045	La-140	7	Radionuclide group assignment.
ISOTPGRP046	La-141	7	Radionuclide group assignment.
ISOTPGRP047	La-142	7	Radionuclide group assignment.
ISOTPGRP048	Ce-141	8	Radionuclide group assignment.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	48	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.2-1 AP1000 ATMOS Input Parameter Specification

Variable Name	Value		Description
ISOTPGRP049	Ce-143	8	Radionuclide group assignment.
ISOTPGRP050	Ce-144	8	Radionuclide group assignment.
ISOTPGRP051	Pr-143	7	Radionuclide group assignment.
ISOTPGRP052	Nd-147	7	Radionuclide group assignment.
ISOTPGRP053	Np-239	8	Radionuclide group assignment.
ISOTPGRP054	Pu-238	8	Radionuclide group assignment.
ISOTPGRP055	Pu-239	8	Radionuclide group assignment.
ISOTPGRP056	Pu-240	8	Radionuclide group assignment.
ISOTPGRP057	Pu-241	8	Radionuclide group assignment.
ISOTPGRP058	Am-241	7	Radionuclide group assignment.
ISOTPGRP059	Cm-242	7	Radionuclide group assignment.
ISOTPGRP060	Cm-244	7	Radionuclide group assignment.
Wet Deposition (WD) Data			
WDCWASH100 1	9.5E-5		The linear term of the washout function.
WDCWASH200 1	0.8		The exponential term of the washout function.
Dry Deposition (DD) Data			
DDNPSGRP001	1		Number of particle size groups.
DDVDEPOS001	0.01		The representative dry deposition velocity of the particle size group.
Dispersion Parameter (DP) Data			
NUM_DIST001	0		The Gaussian plume model of atmospheric dispersion uses spatially dependent dispersion parameters. A value of 0 for this variable specifies that dispersion parameters are approximated by power-law functions.
DPCYSIGA001	0.3658, 0.2751, 0.2089, 0.1474, 0.1046, 0.0722		Six linear terms for σ_y .
DPCYSIGB001	0.9031, 0.9031, 0.9031, 0.9031, 0.9031, 0.9031		Six exponential terms for σ_y .
DPCZSIGA001	2.5E-4, 1.9E-3, 0.2, 0.3, 0.4, 0.2		Six linear terms for σ_z .
DPCZSIGB001	2.125, 1.6021, 0.8543, 0.6532, 0.6021, 0.6020		Six exponential terms for σ_z .
DPYSCALE001	1.0		Linear scaling factor for σ_y factors.
DPZSCALE001	1.27		Linear scaling factor for σ_z factors.
Plume Meander (PM) Data			
PMTIMBAS001	600.0		The time base associated with the parameterization of the plume meander adjustment factor (seconds).
PMBRKPNT001	3600.0		The time breakpoint in the formula used to calculate the plume meander expansion factor (seconds).



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	49	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.2-1 AP1000 ATMOS Input Parameter Specification

Variable Name	Value	Description
PMXPFAC1001	0.2	The exponential factor used in calculating the plume meander expansion factor for releases having durations that are less than or equal to PMBRKPNT001.
PMXPFAC2001	0.25	The exponential factor used in calculating the plume meander expansion factor for releases having durations that are greater than PMBRKPNT001.
Plume Rise (PR) Data		
PRSCLCRW001	1.0	Linear scaling factor on the critical wind speed used in determining if buoyant plumes will be trapped in the turbulent wake of the facility building complex. This functionality is not utilized in this analysis (scaling factor set to 1).
PRSCLDAP001	1.0	Linear scaling factor on the plume rise formula used to determine the amount of plume rise that will occur when unstable or neutral atmospheric conditions occur (classes A through D). This functionality is not utilized in this analysis (scaling factor set to 1).
PRSCLEFP001	1.0	Linear scaling factor on the plume rise formula used to determine the amount of plume rise that will occur when atmospheric conditions are stable (classes E and F). This functionality is not utilized in this analysis (scaling factor set to 1).
Wake Effects (WE) Data		
SIGYINIT001	9.21	Initial σ_y value.
SIGZINIT001	30.53	Initial σ_z value.
WEBUILDH001	65.63	Building height (meters).
Release Data (RD) (Part 1 of 2)		
RDPDIST001 to RDPDIST009	1.0	Fraction (s) of the released material allocated to each of the particle size (deposition velocity) bins. This model utilizes a single deposition velocity, which implies a uniform particle distribution for all chemical groups (9).
RDCORINV001 to RDCORINV060	See Attachment F	Core inventory as a function of radionuclide and activity. The activity is provided in units of Ci. The software requires units of Bq. The unit conversion is done utilizing a factor of 3.7E+10 and assigning it to variable RDCORSCA001.
RDCORSCA001	3.7E+10	Unit conversion factor for radionuclides identified in the core inventory. The activity is changed from Ci to Bq units.
RDAPLFRC001	PARENT	A variable that specifies that the daughter ingrowth products are released in fractions proportional to the release fraction of the parent.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	50	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.2-1 AP1000 ATMOS Input Parameter Specification

Variable Name	Value	Description
Output Control (UC) Data		
OCENDAT1001	FALSE	Boolean flag to indicate that this is not the last program in the series to be run (EARLY and CHRONC are to be run after ATMOS in this analysis).
OCIDEBUG001	0	A value of 0 is specified for this variable to specify no debug output is to be printed.
TYPE0NUMBER	0	A value of 0 is specified for this variable to specify no atmospheric results are to be printed.
Meteorological Specifications		
Meteorological Sampling (M1) Data		
M1METCOD001	2	This variable controls the specification of the weather data used by the ATMOS file. A value of 2 indicates that the weather bin sampling method is used with a separate file (See Attachment C) of hourly weather data covering a period of 1 year (8760 hr).
Boundary Weather (M2) Data		
M2LIMSPA001	10	Last spatial interval boundary (interval boundary 10, or 50 miles in this analysis) for measured weather. Beyond 50 miles (if the 120 hr of recorded weather data do not transport the last plume through the 50 mile distance) weather data is determined by variables in the M2 section.
M2BNDMXH001	1000.0	Boundary weather mixing layer height (meters).
M2IBDSTB001	4	Boundary weather stability class index (D-Stability).
M2BNDRAN001	5.0	Boundary weather rain rate (mm/hr).
M2BNDWWD001	5.0	Boundary weather wind speed (m/s).
Meteorological Bin Sampling (M4) Data		
M4NRNINT001	5	Number of rain distance intervals for binning.
M4RNDSTS001	3.22, 8.05, 16.1, 48.3, 80.5	Endpoints of the rain distance intervals (kilometers). These values must be selected from the spatial endpoint distances assigned to variables GESPAEND001 and GESPAEND002. The five values correspond to distances of 2.0, 5.0, 10.0, 30.0, and 50.0 miles, respectively.
M4NRINTN001	3	Number of rain intensity breakpoints.
M4RNRATE001	2.0, 4.0, 6.0	Rain intensity breakpoints for weather binning (millimeters/hour).
M4NSMPLS001	12	Number of samples per bin.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	51	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.2-1 AP1000 ATMOS Input Parameter Specification

Variable Name	Value	Description
M4IRSEED001	79	Initial seed for random number generator.
Release Data (RD) (Part 2 of 2)		
RDATNAM2001	CFI	Descriptive text describing this particular source.
RDOALARM001	2924.0	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDCUMREL001	4	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5, 0.5, 0.5, 0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	0.0, 0.0, 0.0, 0.0	Heat release rate (Watts).
RDPLHITE001	0.0, 0.0, 0.0, 0.0	Release height for each plume (meters).
RDPLUDUR001	29666.0, 36000.0, 36000.0, 36000.0	Duration of each plume (seconds).
RDPDELAY001	2924.0, 32590.0, 86420.0, 172800.0	Time of release for each plume (seconds after scram).
RDRELFRC001	5.40E-01, 3.19E-03, 3.18E-03, 4.18E-04, 2.11E-02, 9.11E-03, 3.53E-03, 2.64E-05, 1.62E-2	Plume No. 1 release fraction for each of the 9 chemical groups.
RDRELFRC002	2.58E-01, 1.35E-04, 1.35E-04, 1.67E-05, 6.50E-04, 1.68E-04, 4.53E-03, 1.68E-05, 3.40E-4	Plume No. 2 release fraction for each of the 9 chemical groups.
RDRELFRC003	8.40E-02, 0.00E+00, 0.00E+00, 4.47E-06, 0.00E+00, 0.00E+00, 6.00E-03, 2.17E-05, 0.00E+00	Plume No. 3 release fraction for each of the 9 chemical groups.
RDRELFRC004	3.83E-02, 0.00E+00, 0.00E+00, 1.57E-06, 0.00E+00, 0.00E+00, 5.22E-03, 1.89E-05, 0.00E+00	Plume No. 4 release fraction for each of the 9 chemical groups.
RDATNAM2001	CFE	Descriptive text describing this particular source.
RDOALARM001	3004.0	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDCUMREL001	4	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	52	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.2-1 AP1000 ATMOS Input Parameter Specification

Variable Name	Value	Description
RDREFTIM001	0.5, 0.5, 0.5, 0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	0.0, 0.0, 0.0, 0.0	Heat release rate (Watts).
RDPLHITE001	0.0, 0.0, 0.0, 0.0	Release height for each plume (meters).
RDPLUDUR001	16806.0, 36000.0, 36000.0, 36000.0	Duration of each plume (seconds).
RDPDELAY001	3004.0, 19810.0, 89970.0, 176300.0	Time of release for each plume (seconds after scram).
RDRELFRC001	4.16E-01, 5.53E-02, 5.37E-02, 1.23E-03, 3.14E-03, 1.16E-02, 5.57E-05, 9.54E-07, 4.63E-03	Plume No. 1 release fraction for each of the 9 chemical groups.
RDRELFRC002	4.05E-01, 1.26E-03, 1.21E-03, 1.61E-04, 3.43E-04, 2.58E-03, 9.66E-06, 4.56E-08, 6.45E-04	Plume No. 2 release fraction for each of the 9 chemical groups
RDRELFRC003	1.08E-01, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00	Plume No. 3 release fraction for each of the 9 chemical groups.
RDRELFRC004	3.43E-02, 0.00E+00, 0.00E+00, 6.04E-07, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00	Plume No. 4 release fraction for each of the 9 chemical groups.
RDATNAM2001	IC	Descriptive text describing this particular source.
RDOALARM001	4378.0	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	4	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5, 0.5, 0.5, 0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	0.0, 0.0, 0.0, 0.0	Heat release rate (Watts).
RDPLHITE001	0.0, 0.0, 0.0, 0.0	Release height for each plume (meters).
RDPLUDUR001	36000.0, 36000.0, 36000.0, 36000.0	Duration of each plume (seconds).



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	53	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.2-1 AP1000 ATMOS Input Parameter Specification

Variable Name	Value	Description
RDPDELAY001	4378.0, 84810.0, 134400.0, 177600.0	Time of release for each plume (seconds after scram).
RDRELFRC001	9.83E-04, 1.20E-05, 1.15E-05, 8.04E-07, 1.07E-05, 1.31E-05, 1.35E-06, 5.85E-09, 1.20E-05	Plume No. 1 release fraction for each of the 9 chemical groups.
RDRELFRC002	4.93E-04, 0.00E+00, 0.00E+00, 4.83E-09, 0.00E+00, 0.00E+00, 6.00E-09, 3.20E-11, 0.00E+00	Plume No. 2 release fraction for each of the 9 chemical groups.
RDRELFRC003	3.94E-04, 0.00E+00, 0.00E+00, 1.21E-09, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00	Plume No. 3 release fraction for each of the 9 chemical groups.
RDRELFRC004	7.72E-04, 0.00E+00, 0.00E+00, 6.04E-10, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00	Plume No. 4 release fraction for each of the 9 chemical groups.
RDATNAM2001	BP	Descriptive text describing this particular source.
RDOALARM001	31890.0	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	4	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5, 0.5, 0.5, 0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	0.0, 0.0, 0.0, 0.0	Heat release rate (Watts).
RDPLHITE001	0.0, 0.0, 0.0, 0.0	Release height for each plume (meters).
RDPLUDUR001	14550.0, 36000.0, 36000.0, 36000.0	Duration of each plume (seconds).
RDPDELAY001	31890.0, 46440.0, 86490.0, 172800.0	Time of release for each plume (seconds after scram).
RDRELFRC001	1.00E+00, 1.69E-01, 1.62E-01, 6.27E-03, 3.57E-03, 4.48E-02, 1.30E-04, 3.19E-06, 8.93E-03	Plume No. 1 release fraction for each of the 9 chemical groups.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	54	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.2-1 AP1000 ATMOS Input Parameter Specification

Variable Name	Value	Description
RDRELFRC002	0.00E+00, 4.64E-02, 3.38E-02, 3.12E-03, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00, 2.00E-6	Plume No. 2 release fraction for each of the 9 chemical groups.
RDRELFRC003	0.00E+00, 2.31E-01, 6.60E-02, 5.32E-03, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00	Plume No. 3 release fraction for each of the 9 chemical groups.
RDRELFRC004	0.00E+00, 2.80E+03, 9.96E+03, 1.57E-03, 0.00E+00, 0.00E+00, 0.00E+00, 1.00E-06, 0.00E+00	Plume No. 4 release fraction for each of the 9 chemical groups.
RDATNAM2001	CI	Descriptive text describing this particular source.
RDOALARM001	101.0	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	4	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5, 0.5, 0.5, 0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	0.0, 0.0, 0.0, 0.0	Heat release rate (Watts).
RDPLHITE001	0.0, 0.0, 0.0, 0.0	Release height for each plume (meters).
RDPLUDUR001	36000.0, 36000.0, 36000.0, 36000.0	Duration of each plume (seconds).
RDPDELAY001	101.0, 50020.0, 136400.0, 211700.0	Time of release for each plume (seconds after scram).
RDRELFRC001	5.73E-01, 4.56E-02, 2.10E-02, 1.64E-03, 2.03E-02, 4.04E-02, 2.39E-04, 2.97E-06, 3.16E-02	Plume No. 1 release fraction for each of the 9 chemical groups.
RDRELFRC002	1.13E-01, 0.00E+00, 0.00E+00, 1.15E-05, 0.00E+00, 0.00E+00, 1.00E-07, 0.00E+0, 0.00E+00	Plume No. 2 release fraction for each of the 9 chemical groups.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	55	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.2-1 AP1000 ATMOS Input Parameter Specification

Variable Name	Value	Description
RDRELFRC003	5.66E-02, 0.00E+00, 0.00E+00, 8.10E-05, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00	Plume No. 3 release fraction for each of the 9 chemical groups.
RDRELFRC004	2.74E-02, 0.00E+00, 0.00E+00, 1.27E-05, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00	Plume No. 4 release fraction for each of the 9 chemical groups.
RDATNAM2001	CFL	Descriptive text describing this particular source.
RDOALARM001	2922.0	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	4	Number of plumes modeled.
RDMAXRIS001	3	Risk-dominant plume.
RDREFTIM001	0.5, 0.5, 0.5, 0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	0.0, 0.0, 0.0, 0.0	Heat release rate (Watts).
RDPLHITE001	0.0, 0.0, 0.0, 0.0	Release height for each plume (meters).
RDPLUDUR001	23438.0, 36000.0, 36000.0, 36000.0	Duration of each plume (seconds).
RDPDELAY001	2922.0, 26360.0, 108000.0, 194400.	Time of release for each plume (seconds after scram).
RDRELFRC001	3.36E-04, 1.20E-05, 1.15E-05, 1.00E-06, 1.57E-05, 1.68E-05, 9.96E-07, 7.41E-09, 1.61E-05	Plume No. 1 release fraction for each of the 9 chemical groups.
RDRELFRC002	1.19E-03, 5.00E-08, 3.23E-08, 1.75E-08, 1.04E-06, 2.90E-07, 1.07E-05, 4.05E-08, 6.60E-07	Plume No. 2 release fraction for each of the 9 chemical groups.
RDRELFRC003	9.79E-01, 2.13E-05, 1.16E-05, 2.47E-05, 2.39E-03, 1.26E-03, 9.75E-02, 3.68E-04, 2.25E-03	Plume No. 3 release fraction for each of the 9 chemical groups.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	56	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.2-1 AP1000 ATMOS Input Parameter Specification

Variable Name	Value	Description
RDRELFRC004	0.00E+00, 0.00E+00, 2.56E-07, 1.20E-05, 4.42E-04, 1.55E-04, 4.39E-02, 1.66E-04, 3.46E-04	Plume No. 4 release fraction for each of the 9 chemical groups.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	57	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

5.1.1.3 US-APWR (Attachment G)

Table 5.1.1.3-1 US-APWR ATMOS Input Parameter Specification

Variable Name	Value	Description
Run Identification (RI) Data		
RIATNAM1001	US-APWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS	The title of the ATMOS input file.
Geometry (GE) Data		
GENUMRAD00 1	10	Number of radial spatial elements defined in the model.
GESPAEND001	1.61, 3.22, 4.83, 6.44, 8.05	Distances to endpoints of spatial intervals in kilometers (first set). Note that these values correspond to those provided for the site input file provided in Attachment D.
GESPAEND002	16.1, 32.2, 48.3, 64.4, 80.5	Distances to endpoints of spatial intervals in kilometers (second set). Note that these values correspond to those provided for the site input file provided in Attachment D.
Radionuclide (RI) Data		
ISNUMSTB001	27	Number of pseudo-stable nuclides defined in the model.
ISNAMSTB001	I-129	Pseudostable radionuclide: daughter of Te-129 and Te-129m.
ISNAMSTB002	Xe-131m	Pseudostable radionuclide: daughter of I-131.
ISNAMSTB003	Xe-133m	Pseudostable radionuclide: daughter of I-133.
ISNAMSTB004	Xe-135m	Pseudostable radionuclide: daughter of I-135.
ISNAMSTB005	Cs-135	Pseudostable radionuclide: daughter of Xe-135 and Xe-135m.
ISNAMSTB006	Sm-147	Pseudostable radionuclide: daughter of Pm-147.
ISNAMSTB007	U-234	Pseudostable radionuclide: daughter of Pu-238.
ISNAMSTB008	U-235	Pseudostable radionuclide: daughter of Pu-239.
ISNAMSTB009	U-236	Pseudostable radionuclide: daughter of Pu-240.
ISNAMSTB010	U-237	Pseudostable radionuclide: daughter of Pu-241.
ISNAMSTB011	Np-237	Pseudostable radionuclide: daughter of Am-241.
ISNAMSTB012	Rb-87	Pseudostable radionuclide: daughter of Kr-87.
ISNAMSTB013	Ba-137m	Pseudostable radionuclide: daughter of Cs-137.
ISNAMSTB014	Rb-88	Pseudostable radionuclide: daughter of Kr-88.
ISNAMSTB015	Y-91m	Pseudostable radionuclide: daughter of Sr-91.
ISNAMSTB016	Zr-93	Pseudostable radionuclide: daughter of Y-93.
ISNAMSTB017	Nb-93m	Pseudostable radionuclide: daughter of Zr-93.
ISNAMSTB018	Nb-95m	Pseudostable radionuclide: daughter of Zr-95.
ISNAMSTB019	Nb-97	Pseudostable radionuclide: daughter of Zr-97 and Nb-97m.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	58	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.3-1 US-APWR ATMOS Input Parameter Specification

Variable Name	Value		Description
ISNAMSTB020	Nb-97m		Pseudostable radionuclide: daughter of Zr-97.
ISNAMSTB021	Tc-99		Pseudostable radionuclide: daughter of Mo-99.
ISNAMSTB022	Rh-103m		Pseudostable radionuclide: daughter of Ru-103.
ISNAMSTB023	Rh-106		Pseudostable radionuclide: daughter of Ru-106.
ISNAMSTB024	Te-131		Pseudostable radionuclide: daughter of Te-131m.
ISNAMSTB025	Pr-144		Pseudostable radionuclide: daughter of Ce-144 and Pr-144m.
ISNAMSTB026	Pr-144m		Pseudostable radionuclide: daughter of Ce-144.
ISNAMSTB027	Pm-147		Pseudostable radionuclide: daughter of Nd-147.
ISNUMISO001	60		Number of radioactive nuclides defined in the model.
ISMAXGRP001	9		Number of chemical element groups defined in the model. See Section 2.2.1.1 for information on each chemical group.
	Wet Deposition	Dry Deposition	
ISDEPFLA001	FALSE	FALSE	Logical flag for chemical group one that indicates whether it is subject to wet/dry deposition.
ISDEPFLA002	TRUE	TRUE	Logical flag for chemical group two (Iodine) that indicates whether it is subject to wet/dry deposition.
ISDEPFLA003	TRUE	TRUE	Logical flag for chemical group three that indicates whether it is subject to wet/dry deposition.
ISDEPFLA004	TRUE	TRUE	Logical flag for chemical group four that indicates whether it is subject to wet/dry deposition.
ISDEPFLA005	TRUE	TRUE	Logical flag for chemical group five that indicates whether it is subject to wet/dry deposition.
ISDEPFLA006	TRUE	TRUE	Logical flag for chemical group six that indicates whether it is subject to wet/dry deposition.
ISDEPFLA007	TRUE	TRUE	Logical flag for chemical group seven that indicates whether it is subject to wet/dry deposition.
ISDEPFLA008	TRUE	TRUE	Logical flag for chemical group eight that indicates whether it is subject to wet/dry deposition.
ISDEPFLA009	TRUE	TRUE	Logical flag for chemical group nine that indicates whether it is subject to wet/dry deposition.
	Nuclide	Group	
ISOTPGRP001	Co-58	6	Radionuclide group assignment.
ISOTPGRP002	Co-60	6	Radionuclide group assignment.
ISOTPGRP003	Kr-85	1	Radionuclide group assignment.
ISOTPGRP004	Kr-85m	1	Radionuclide group assignment.
ISOTPGRP005	Kr-87	1	Radionuclide group assignment.
ISOTPGRP006	Kr-88	1	Radionuclide group assignment.
ISOTPGRP007	Rb-86	3	Radionuclide group assignment.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	59	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.3-1 US-APWR ATMOS Input Parameter Specification

Variable Name	Value		Description
ISOTPGRP008	Sr-89	5	Radionuclide group assignment.
ISOTPGRP009	Sr-90	5	Radionuclide group assignment.
ISOTPGRP010	Sr-91	5	Radionuclide group assignment.
ISOTPGRP011	Sr-92	5	Radionuclide group assignment.
ISOTPGRP012	Y-90	7	Radionuclide group assignment.
ISOTPGRP013	Y-91	7	Radionuclide group assignment.
ISOTPGRP014	Y-92	7	Radionuclide group assignment.
ISOTPGRP015	Y-93	7	Radionuclide group assignment.
ISOTPGRP016	Zr-95	7	Radionuclide group assignment.
ISOTPGRP017	Zr-97	7	Radionuclide group assignment.
ISOTPGRP018	Nb-95	7	Radionuclide group assignment.
ISOTPGRP019	Mo-99	6	Radionuclide group assignment.
ISOTPGRP020	Tc-99m	6	Radionuclide group assignment.
ISOTPGRP021	Ru-103	6	Radionuclide group assignment.
ISOTPGRP022	Ru-105	6	Radionuclide group assignment.
ISOTPGRP023	Ru-106	6	Radionuclide group assignment.
ISOTPGRP024	Rh-105	6	Radionuclide group assignment.
ISOTPGRP025	Sb-127	4	Radionuclide group assignment.
ISOTPGRP026	Sb-129	4	Radionuclide group assignment.
ISOTPGRP027	Te-127	4	Radionuclide group assignment.
ISOTPGRP028	Te-127m	4	Radionuclide group assignment.
ISOTPGRP029	Te-129	4	Radionuclide group assignment.
ISOTPGRP030	Te-129m	4	Radionuclide group assignment.
ISOTPGRP031	Te-131m	4	Radionuclide group assignment.
ISOTPGRP032	Te-132	4	Radionuclide group assignment.
ISOTPGRP033	I-131	2	Radionuclide group assignment.
ISOTPGRP034	I-132	2	Radionuclide group assignment.
ISOTPGRP035	I-133	2	Radionuclide group assignment.
ISOTPGRP036	I-134	2	Radionuclide group assignment.
ISOTPGRP037	I-135	2	Radionuclide group assignment.
ISOTPGRP038	Xe-133	1	Radionuclide group assignment.
ISOTPGRP039	Xe-135	1	Radionuclide group assignment.
ISOTPGRP040	Cs-134	3	Radionuclide group assignment.
ISOTPGRP041	Cs-136	3	Radionuclide group assignment.
ISOTPGRP042	Cs-137	3	Radionuclide group assignment.
ISOTPGRP043	Ba-139	9	Radionuclide group assignment.
ISOTPGRP044	Ba-140	9	Radionuclide group assignment.
ISOTPGRP045	La-140	7	Radionuclide group assignment.
ISOTPGRP046	La-141	7	Radionuclide group assignment.
ISOTPGRP047	La-142	7	Radionuclide group assignment.
ISOTPGRP048	Ce-141	8	Radionuclide group assignment.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	60	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.3-1 US-APWR ATMOS Input Parameter Specification

Variable Name	Value		Description
ISOTPGRP049	Ce-143	8	Radionuclide group assignment.
ISOTPGRP050	Ce-144	8	Radionuclide group assignment.
ISOTPGRP051	Pr-143	7	Radionuclide group assignment.
ISOTPGRP052	Nd-147	7	Radionuclide group assignment.
ISOTPGRP053	Np-239	8	Radionuclide group assignment.
ISOTPGRP054	Pu-238	8	Radionuclide group assignment.
ISOTPGRP055	Pu-239	8	Radionuclide group assignment.
ISOTPGRP056	Pu-240	8	Radionuclide group assignment.
ISOTPGRP057	Pu-241	8	Radionuclide group assignment.
ISOTPGRP058	Am-241	7	Radionuclide group assignment.
ISOTPGRP059	Cm-242	7	Radionuclide group assignment.
ISOTPGRP060	Cm-244	7	Radionuclide group assignment.
Wet Deposition (WD) Data			
WDCWASH100 1	9.5E-5		The linear term of the washout function.
WDCWASH200 1	0.8		The exponential term of the washout function.
Dry Deposition (DD) Data			
DDNPSGRP001	1		Number of particle size groups.
DDVDEPOS001	0.01		The representative dry deposition velocity of the particle size group.
Dispersion Parameter (DP) Data			
NUM_DIST001	0		The Gaussian plume model of atmospheric dispersion uses spatially dependent dispersion parameters. A value of 0 for this variable specifies that dispersion parameters are approximated by power-law functions.
DPCYSIGA001	0.3658, 0.2751, 0.2089, 0.1474, 0.1046, 0.0722		Six linear terms for σ_y .
DPCYSIGB001	0.9031, 0.9031, 0.9031, 0.9031, 0.9031, 0.9031		Six exponential terms for σ_y .
DPCZSIGA001	2.5E-4, 1.9E-3, 0.2, 0.3, 0.4, 0.2		Six linear terms for σ_z .
DPCZSIGB001	2.125, 1.6021, 0.8543, 0.6532, 0.6021, 0.6020		Six exponential terms for σ_z .
DPYSCALE001	1.0		Linear scaling factor for σ_y factors.
DPZSCALE001	1.27		Linear scaling factor for σ_z factors.
Plume Meander (PM) Data			
PMTIMBAS001	600.0		The time base associated with the parameterization of the plume meander adjustment factor (seconds).
PMBRKPNT001	3600.0		The time breakpoint in the formula used to calculate the plume meander expansion factor (seconds).



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	61	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.3-1 US-APWR ATMOS Input Parameter Specification

Variable Name	Value	Description
PMXPFAC1001	0.2	The exponential factor used in calculating the plume meander expansion factor for releases having durations that are less than or equal to PMBRKPNT001.
PMXPFAC2001	0.25	The exponential factor used in calculating the plume meander expansion factor for releases having durations that are greater than PMBRKPNT001.
Plume Rise (PR) Data		
PRSCLCRW001	1.0	Linear scaling factor on the critical wind speed used in determining if buoyant plumes will be trapped in the turbulent wake of the facility building complex. This functionality is not utilized in this analysis (scaling factor set to 1).
PRSCLDAP001	1.0	Linear scaling factor on the plume rise formula used to determine the amount of plume rise that will occur when unstable or neutral atmospheric conditions occur (classes A through D). This functionality is not utilized in this analysis (scaling factor set to 1).
PRSCLEFP001	1.0	Linear scaling factor on the plume rise formula used to determine the amount of plume rise that will occur when atmospheric conditions are stable (classes E and F). This functionality is not utilized in this analysis (scaling factor set to 1).
Wake Effects (WE) Data		
SIGYINIT001	11.2	Initial σ_y value.
SIGZINIT001	30.1	Initial σ_z value.
WEBUILDH001	64.7	Building height (meters).
Release Data (RD) (Part 1 of 2)		
RDPSDIST001 to RDPSDIST009	1.0	Fraction (s) of the released material allocated to each of the particle size (deposition velocity) bins. This model utilizes a single deposition velocity, which implies a uniform particle distribution for all chemical groups (9).
RDCORINV001 to RDCORINV060	See Attachment G	Core inventory as a function of radionuclide and activity. The activity is provided in units of Ci. The software requires units of Bq. The unit conversion is done utilizing a factor of 3.7E+10 and assigning it to variable RDCORSCA001.
RDCORSCA001	3.7E+10	Unit conversion factor for radionuclides identified in the core inventory. The activity is changed from Ci to Bq units.
RDAPLFRC001	PARENT	A variable that specifies that the daughter ingrowth products are released in fractions proportional to the release fraction of the parent.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	62	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.3-1 US-APWR ATMOS Input Parameter Specification

Variable Name	Value	Description
Output Control (UC) Data		
OCENDAT1001	FALSE	Boolean flag to indicate that this is not the last program in the series to be run (EARLY and CHRONC are to be run after ATMOS in this analysis).
OCIDEBUG001	0	A value of 0 is specified for this variable to specify no debug output is to be printed.
TYPE0NUMBER	0	A value of 0 is specified for this variable to specify no atmospheric results are to be printed.
Meteorological Specifications		
Meteorological Sampling (M1) Data		
M1METCOD001	2	This variable controls the specification of the weather data used by the ATMOS file. A value of 2 indicates that the weather bin sampling method is used with a separate file (See Attachment C) of hourly weather data covering a period of 1 year (8760 hr).
Boundary Weather (M2) Data		
M2LIMSPA001	10	Last spatial interval boundary (interval boundary 10, or 50 miles in this analysis) for measured weather. Beyond 50 miles (if the 120 hr of recorded weather data do not transport the last plume through the 50 mile distance) weather data is determined by variables in the M2 section.
M2BNDMXH001	1000.0	Boundary weather mixing layer height (meters).
M2IBDSTB001	4	Boundary weather stability class index (D-Stability).
M2BNDRAN001	5.0	Boundary weather rain rate (mm/hr).
M2BNDWWD001	5.0	Boundary weather wind speed (m/s).
Meteorological Bin Sampling (M4) Data		
M4NRNINT001	5	Number of rain distance intervals for binning.
M4RNDSTS001	3.22, 8.05, 16.1, 48.3, 80.5	Endpoints of the rain distance intervals (kilometers). These values must be selected from the spatial endpoint distances assigned to variables GESPAEND001 and GESPAEND002. The five values correspond to distances of 2.0, 5.0, 10.0, 30.0, and 50.0 miles, respectively.
M4NRINTN001	3	Number of rain intensity breakpoints.
M4RNRATE001	2.0, 4.0, 6.0	Rain intensity breakpoints for weather binning (millimeters/hour).
M4NSMPLS001	12	Number of samples per bin.
M4IRSEED001	79	Initial seed for random number generator.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	63	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.3-1 US-APWR ATMOS Input Parameter Specification

Variable Name	Value	Description
Release Data (RD) (Part 2 of 2)		
RDATNAM2001	RC1	Descriptive text describing this particular source.
RDOALARM001	1.05E+05	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	4	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5, 0.5, 0.5, 0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	0.0, 0.0, 0.0, 0.0	Heat release rate (Watts).
RDPLHITE001	0.0, 0.0, 0.0, 0.0	Release height for each plume (meters).
RDPLUDUR001	1.52E+04, 3.60E+04, 8.64E+04, 8.64E+04	Duration of each plume (seconds).
RDPDELAY001	1.02E+05, 1.17E+05, 1.53E+05, 2.39E+05	Time of release for each plume (seconds after scram).
RDRELFRC001	6.88E-01, 1.96E-01, 1.56E-01, 8.55E-02, 3.49E-04, 1.45E-02, 1.47E-05, 4.34E-05, 2.90E-03	Plume No. 1 release fraction for each of the 9 chemical groups.
RDRELFRC002	2.48E-01, 8.73E-02, 3.91E-02, 3.91E-02, 4.55E-03, 3.87E-03, 2.25E-04, 2.38E-04, 8.82E-03	Plume No. 2 release fraction for each of the 9 chemical groups.
RDRELFRC003	2.72E-03, 4.03E-03, 8.47E-03, 7.88E-03, 3.71E-03, 4.21E-03, 2.12E-03, 1.35E-03, 3.50E-3	Plume No. 3 release fraction for each of the 9 chemical groups.
RDRELFRC004	4.87E-03, 2.29E-03, 2.66E-03, 6.09E-04, 1.85E-04, 7.59E-05, 6.23E-04, 5.30E-04, 9.68E-05	Plume No. 4 release fraction for each of the 9 chemical groups.
RDATNAM2001	RC2	Descriptive text describing this particular source.
RDOALARM001	1.16E+04	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	4	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	64	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.3-1 US-APWR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDREFTIM001	0.5, 0.5, 0.5, 0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	0.0, 0.0, 0.0, 0.0	Heat release rate (Watts).
RDPLHITE001	0.0, 0.0, 0.0, 0.0	Release height for each plume (meters).
RDPLUDUR001	3.28E+04, 3.60E+04, 3.60E+04, 3.60E+04	Duration of each plume (seconds).
RDPDELAY001	9.01E+03, 4.18E+04, 9.50E+04, 1.63E+05	Time of release for each plume (seconds after scram).
RDRELFRC001	7.31E-01, 3.61E-02, 2.13E-02, 3.56E-02, 5.14E-03, 1.50E-02, 3.62E-03, 1.95E-03, 8.12E-03	Plume No. 1 release fraction for each of the 9 chemical groups.
RDRELFRC002	2.38E-01, 3.22E-02, 4.19E-03, 7.24E-03, 2.61E-04, 7.07E-04, 4.01E-04, 3.65E-04, 4.38E-04	Plume No. 2 release fraction for each of the 9 chemical groups.
RDRELFRC003	2.20E-02, 1.65E-01, 1.16E-02, 2.86E-02, 1.23E-03, 4.00E-05, 5.18E-05, 1.58E-04, 1.50E-03	Plume No. 3 release fraction for each of the 9 chemical groups.
RDRELFRC004	5.37E-03, 4.70E-02, 5.46E-03, 5.88E-03, 1.11E-03, 6.12E-05, 5.64E-05, 2.47E-04, 1.11E-03	Plume No. 4 release fraction for each of the 9 chemical groups.
RDATNAM2001	RC3	Descriptive text describing this particular source.
RDOALARM001	1.72E+05	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	4	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5, 0.5, 0.5, 0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	0.0, 0.0, 0.0, 0.0	Heat release rate (Watts).
RDPLHITE001	0.0, 0.0, 0.0, 0.0	Release height for each plume (meters).
RDPLUDUR001	3.60E+04, 3.60E+04, 3.60E+04, 3.60E+04	Duration of each plume (seconds).



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	65	of	105

Client	PSEG Nuclear Development		Prepared by		Date	
Project	PSEG ESPA		Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by		Date

Table 5.1.1.3-1 US-APWR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDPDELAY001	1.70E+05, 2.11E+05, 2.55E+05, 3.39E+05	Time of release for each plume (seconds after scram).
RDRELFRC001	9.38E-01, 4.70E-01, 4.58E-01, 4.19E-01, 4.22E-02, 2.71E-01, 1.49E-03, 6.33E-03, 1.02E-01	Plume No. 1 release fraction for each of the 9 chemical groups.
RDRELFRC002	4.74E-02, 8.37E-03, 6.51E-03, 6.41E-03, 1.77E-03, 4.94E-03, 6.60E-05, 8.66E-05, 3.49E-03	Plume No. 2 release fraction for each of the 9 chemical groups.
RDRELFRC003	1.45E-03, 1.03E-03, 1.11E-03, 2.84E-03, 4.37E-04, 1.84E-04, 6.37E-06, 6.00E-05, 2.24E-04	Plume No. 3 release fraction for each of the 9 chemical groups.
RDRELFRC004	5.54E-04, 2.46E-04, 1.80E-05, 1.49E-03, 5.37E-05, 0.00E+00, 2.33E-07, 2.75E-06, 2.42E-05	Plume No. 4 release fraction for each of the 9 chemical groups.
RDATNAM2001	RC4	Descriptive text describing this particular source.
RDOALARM001	1.83E+04	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	4	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5, 0.5, 0.5, 0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	0.0, 0.0, 0.0, 0.0	Heat release rate (Watts).
RDPLHITE001	0.0, 0.0, 0.0, 0.0	Release height for each plume (meters).
RDPLUDUR001	1.58E+04, 3.17E+04, 3.60E+04, 3.60E+04	Duration of each plume (seconds).
RDPDELAY001	7.80E+04, 9.38E+04, 1.25E+05, 2.12E+05	Time of release for each plume (seconds after scram).
RDRELFRC001	9.98E-01, 3.79E-02, 3.29E-02, 4.88E-02, 4.53E-03, 2.38E-02, 1.21E-04, 3.67E-04, 2.29E-02	Plume No. 1 release fraction for each of the 9 chemical groups.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	66	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.3-1 US-APWR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDRELFRC002	1.56E-03, 1.66E-02, 8.59E-03, 3.77E-03, 3.05E-04, 2.79E-03, 6.78E-07, 3.49E-06, 5.64E-04	Plume No. 2 release fraction for each of the 9 chemical groups
RDRELFRC003	2.72E-04, 7.50E-03, 3.40E-03, 7.78E-03, 1.32E-03, 1.08E-05, 1.51E-05, 4.73E-04, 4.69E-04	Plume No. 3 release fraction for each of the 9 chemical groups
RDRELFRC004	1.04E-04, 6.34E-03, 1.11E-03, 2.78E-03, 1.51E-06, 0.00E+00, 3.05E-08, 9.57E-07, 9.97E-07	Plume No. 4 release fraction for each of the 9 chemical groups
RDATNAM2001	RC5	Descriptive text describing this particular source.
RDOALARM001	1.16E+04	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	4	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5, 0.5, 0.5, 0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	0.0, 0.0, 0.0, 0.0	Heat release rate (Watts).
RDPLHITE001	0.0, 0.0, 0.0, 0.0	Release height for each plume (meters).
RDPLUDUR001	1.01E+04, 3.60E+04, 3.60E+04, 3.60E+04	Duration of each plume (seconds).
RDPDELAY001	1.89E+05, 1.99E+05, 2.59E+05, 3.42E+05	Time of release for each plume (seconds after scram).
RDRELFRC001	9.28E-01, 2.72E-03, 1.06E-03, 6.42E-03, 8.05E-05, 9.95E-05, 2.99E-05, 1.87E-05, 6.61E-05	Plume No. 1 release fraction for each of the 9 chemical groups.
RDRELFRC002	3.53E-02, 2.23E-02, 4.21E-03, 2.53E-03, 1.45E-06, 1.92E-06, 5.29E-07, 3.42E-07, 1.60E-06	Plume No. 2 release fraction for each of the 9 chemical groups.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	67	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.3-1 US-APWR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDRELFRC003	1.83E-02, 6.02E-02, 8.03E-03, 3.11E-03, 5.15E-07, 1.70E-06, 5.69E-08, 4.62E-08, 1.30E-06	Plume No. 3 release fraction for each of the 9 chemical groups.
RDRELFRC004	6.47E-03, 5.72E-02, 6.42E-03, 4.56E-03, 1.64E-06, 9.22E-07, 2.10E-09, 1.29E-08, 3.67E-06	Plume No. 4 release fraction for each of the 9 chemical groups.
RDATNAM2001	RC6	Descriptive text describing this particular source.
RDOALARM001	1.80E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	4	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5, 0.5, 0.5, 0.5	Representative time point for dispersion and radioactive decay for each plume. A value of 0.5 corresponds to the midpoints of the plumes.
RDPLHEAT001	0.0, 0.0, 0.0, 0.0	Heat release rate (Watts).
RDPLHITE001	0.0, 0.0, 0.0, 0.0	Release height for each plume (meters).
RDPLUDUR001	1.37E+04, 3.60E+04, 3.60E+04, 3.60E+04	Duration of each plume (seconds).
RDPDELAY001	1.27E+03, 1.49E+04, 8.77E+04, 1.74E+05	Time of release for each plume (seconds after scram).
RDRELFRC001	1.24E-04, 1.68E-06, 1.66E-06, 1.30E-06, 1.55E-07, 6.31E-07, 3.19E-09, 5.31E-09, 2.44E-07	Plume No. 1 release fraction for each of the 9 chemical groups.
RDRELFRC002	6.54E-04, 1.46E-09, 0.00E+00, 6.96E-09, 1.79E-08, 6.46E-09, 2.88E-10, 2.76E-10, 2.45E-08	Plume No. 2 release fraction for each of the 9 chemical groups.
RDRELFRC003	6.90E-04, 1.86E-09, 0.00E+00, 5.08E-10, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00, 0.00E+00	Plume No. 3 release fraction for each of the 9 chemical groups.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	68	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.3-1 US-APWR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDRELFRC004	6.45E-04, 0.00E+00, 0.00E+00, 8.88E-11, 6.46E-11, 4.43E-11, 4.55E-13, 1.23E-12, 6.38E-11	Plume No. 4 release fraction for each of the 9 chemical groups.

5.1.1.4 U.S. EPR (Attachment H)

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value	Description
Run Identification (RI) Data		
RIATNAM1001	U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS	The title of the ATMOS input file.
Geometry (GE) Data		
GENUMRAD00 1	10	Number of radial spatial elements defined in the model.
GESPAEND001	1.61, 3.22, 4.83, 6.44, 8.05	Distances to endpoints of spatial intervals in kilometers (first set). Note that these values correspond to those provided for the site input file provided in Attachment D.
GESPAEND002	16.1, 32.2, 48.3, 64.4, 80.5	Distances to endpoints of spatial intervals in kilometers (second set). Note that these values correspond to those provided for the site input file provided in Attachment D.
Radionuclide (RI) Data		
ISNUMSTB001	27	Number of pseudo-stable nuclides defined in the model.
ISNAMSTB001	I-129	Pseudostable radionuclide: daughter of Te-129 and Te-129m.
ISNAMSTB002	Xe-131m	Pseudostable radionuclide: daughter of I-131.
ISNAMSTB003	Xe-133m	Pseudostable radionuclide: daughter of I-133.
ISNAMSTB004	Xe-135m	Pseudostable radionuclide: daughter of I-135.
ISNAMSTB005	Cs-135	Pseudostable radionuclide: daughter of Xe-135 and Xe-135m.
ISNAMSTB006	Sm-147	Pseudostable radionuclide: daughter of Pm-147.
ISNAMSTB007	U-234	Pseudostable radionuclide: daughter of Pu-238.
ISNAMSTB008	U-235	Pseudostable radionuclide: daughter of Pu-239.
ISNAMSTB009	U-236	Pseudostable radionuclide: daughter of Pu-240.
ISNAMSTB010	U-237	Pseudostable radionuclide: daughter of Pu-241.
ISNAMSTB011	Np-237	Pseudostable radionuclide: daughter of Am-241.
ISNAMSTB012	Rb-87	Pseudostable radionuclide: daughter of Kr-87.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	69	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value		Description
ISNAMSTB013	Ba-137m		Pseudostable radionuclide: daughter of Cs-137.
ISNAMSTB014	Rb-88		Pseudostable radionuclide: daughter of Kr-88.
ISNAMSTB015	Y-91m		Pseudostable radionuclide: daughter of Sr-91.
ISNAMSTB016	Zr-93		Pseudostable radionuclide: daughter of Y-93.
ISNAMSTB017	Nb-93m		Pseudostable radionuclide: daughter of Zr-93.
ISNAMSTB018	Nb-95m		Pseudostable radionuclide: daughter of Zr-95.
ISNAMSTB019	Nb-97		Pseudostable radionuclide: daughter of Zr-97 and Nb-97m.
ISNAMSTB020	Nb-97m		Pseudostable radionuclide: daughter of Zr-97.
ISNAMSTB021	Tc-99		Pseudostable radionuclide: daughter of Mo-99.
ISNAMSTB022	Rh-103m		Pseudostable radionuclide: daughter of Ru-103.
ISNAMSTB023	Rh-106		Pseudostable radionuclide: daughter of Ru-106.
ISNAMSTB024	Te-131		Pseudostable radionuclide: daughter of Te-131m.
ISNAMSTB025	Pr-144		Pseudostable radionuclide: daughter of Ce-144 and Pr-144m.
ISNAMSTB026	Pr-144m		Pseudostable radionuclide: daughter of Ce-144.
ISNAMSTB027	Pm-147		Pseudostable radionuclide: daughter of Nd-147.
ISNUMISO001	60		Number of radioactive nuclides defined in the model.
ISMAXGRP001	9		Number of chemical element groups defined in the model. See Section 2.2.1.1 for information on each chemical group.
	Wet Deposition	Dry Deposition	
ISDEPFLA001	FALSE	FALSE	Logical flag for chemical group one that indicates whether it is subject to wet/dry deposition.
ISDEPFLA002	TRUE	TRUE	Logical flag for chemical group two (Iodine) that indicates whether it is subject to wet/dry deposition.
ISDEPFLA003	TRUE	TRUE	Logical flag for chemical group three that indicates whether it is subject to wet/dry deposition.
ISDEPFLA004	TRUE	TRUE	Logical flag for chemical group four that indicates whether it is subject to wet/dry deposition.
ISDEPFLA005	TRUE	TRUE	Logical flag for chemical group five that indicates whether it is subject to wet/dry deposition.
ISDEPFLA006	TRUE	TRUE	Logical flag for chemical group six that indicates whether it is subject to wet/dry deposition.
ISDEPFLA007	TRUE	TRUE	Logical flag for chemical group seven that indicates whether it is subject to wet/dry deposition.
ISDEPFLA008	TRUE	TRUE	Logical flag for chemical group eight that indicates whether it is subject to wet/dry deposition.
ISDEPFLA009	TRUE	TRUE	Logical flag for chemical group nine that indicates whether it is subject to wet/dry deposition.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	70	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value		Description
	Nuclide	Group	
ISOTPGRP001	Co-58	6	Radionuclide group assignment.
ISOTPGRP002	Co-60	6	Radionuclide group assignment.
ISOTPGRP003	Kr-85	1	Radionuclide group assignment.
ISOTPGRP004	Kr-85m	1	Radionuclide group assignment.
ISOTPGRP005	Kr-87	1	Radionuclide group assignment.
ISOTPGRP006	Kr-88	1	Radionuclide group assignment.
ISOTPGRP007	Rb-86	3	Radionuclide group assignment.
ISOTPGRP008	Sr-89	5	Radionuclide group assignment.
ISOTPGRP009	Sr-90	5	Radionuclide group assignment.
ISOTPGRP010	Sr-91	5	Radionuclide group assignment.
ISOTPGRP011	Sr-92	5	Radionuclide group assignment.
ISOTPGRP012	Y-90	7	Radionuclide group assignment.
ISOTPGRP013	Y-91	7	Radionuclide group assignment.
ISOTPGRP014	Y-92	7	Radionuclide group assignment.
ISOTPGRP015	Y-93	7	Radionuclide group assignment.
ISOTPGRP016	Zr-95	7	Radionuclide group assignment.
ISOTPGRP017	Zr-97	7	Radionuclide group assignment.
ISOTPGRP018	Nb-95	7	Radionuclide group assignment.
ISOTPGRP019	Mo-99	6	Radionuclide group assignment.
ISOTPGRP020	Tc-99m	6	Radionuclide group assignment.
ISOTPGRP021	Ru-103	6	Radionuclide group assignment.
ISOTPGRP022	Ru-105	6	Radionuclide group assignment.
ISOTPGRP023	Ru-106	6	Radionuclide group assignment.
ISOTPGRP024	Rh-105	6	Radionuclide group assignment.
ISOTPGRP025	Sb-127	4	Radionuclide group assignment.
ISOTPGRP026	Sb-129	4	Radionuclide group assignment.
ISOTPGRP027	Te-127	4	Radionuclide group assignment.
ISOTPGRP028	Te-127m	4	Radionuclide group assignment.
ISOTPGRP029	Te-129	4	Radionuclide group assignment.
ISOTPGRP030	Te-129m	4	Radionuclide group assignment.
ISOTPGRP031	Te-131m	4	Radionuclide group assignment.
ISOTPGRP032	Te-132	4	Radionuclide group assignment.
ISOTPGRP033	I-131	2	Radionuclide group assignment.
ISOTPGRP034	I-132	2	Radionuclide group assignment.
ISOTPGRP035	I-133	2	Radionuclide group assignment.
ISOTPGRP036	I-134	2	Radionuclide group assignment.
ISOTPGRP037	I-135	2	Radionuclide group assignment.
ISOTPGRP038	Xe-133	1	Radionuclide group assignment.
ISOTPGRP039	Xe-135	1	Radionuclide group assignment.
ISOTPGRP040	Cs-134	3	Radionuclide group assignment.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	71	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value		Description
ISOTPGRP041	Cs-136	3	Radionuclide group assignment.
ISOTPGRP042	Cs-137	3	Radionuclide group assignment.
ISOTPGRP043	Ba-139	9	Radionuclide group assignment.
ISOTPGRP044	Ba-140	9	Radionuclide group assignment.
ISOTPGRP045	La-140	7	Radionuclide group assignment.
ISOTPGRP046	La-141	7	Radionuclide group assignment.
ISOTPGRP047	La-142	7	Radionuclide group assignment.
ISOTPGRP048	Ce-141	8	Radionuclide group assignment.
ISOTPGRP049	Ce-143	8	Radionuclide group assignment.
ISOTPGRP050	Ce-144	8	Radionuclide group assignment.
ISOTPGRP051	Pr-143	7	Radionuclide group assignment.
ISOTPGRP052	Nd-147	7	Radionuclide group assignment.
ISOTPGRP053	Np-239	8	Radionuclide group assignment.
ISOTPGRP054	Pu-238	8	Radionuclide group assignment.
ISOTPGRP055	Pu-239	8	Radionuclide group assignment.
ISOTPGRP056	Pu-240	8	Radionuclide group assignment.
ISOTPGRP057	Pu-241	8	Radionuclide group assignment.
ISOTPGRP058	Am-241	7	Radionuclide group assignment.
ISOTPGRP059	Cm-242	7	Radionuclide group assignment.
ISOTPGRP060	Cm-244	7	Radionuclide group assignment.
Wet Deposition (WD) Data			
WDCWASH100 1	9.5E-5		The linear term of the washout function.
WDCWASH200 1	0.8		The exponential term of the washout function.
Dry Deposition (DD) Data			
DDNPSGRP001	1		Number of particle size groups.
DDVDEPOS001	0.01		The representative dry deposition velocity of the particle size group.
Dispersion Parameter (DP) Data			
NUM_DIST001	0		The Gaussian plume model of atmospheric dispersion uses spatially dependent dispersion parameters. A value of 0 for this variable specifies that dispersion parameters are approximated by power-law functions.
DPCYSIGA001	0.3658, 0.2751, 0.2089, 0.1474, 0.1046, 0.0722		Six linear terms for σ_y .
DPCYSIGB001	0.9031, 0.9031, 0.9031, 0.9031, 0.9031, 0.9031		Six exponential terms for σ_y .
DPCZSIGA001	2.5E-4, 1.9E-3, 0.2, 0.3, 0.4, 0.2		Six linear terms for σ_z .



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	72	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value	Description
DPCZSIGB001	2.125, 1.6021, 0.8543, 0.6532, 0.6021, 0.6020	Six exponential terms for σ_z .
DPYSCALE001	1.0	Linear scaling factor for σ_y factors.
DPZSCALE001	1.27	Linear scaling factor for σ_z factors.
Plume Meander (PM) Data		
PMTIMBAS001	600.0	The time base associated with the parameterization of the plume meander adjustment factor (seconds).
PMBRKPNT001	3600.0	The time breakpoint in the formula used to calculate the plume meander expansion factor (seconds).
PMXPFAC1001	0.2	The exponential factor used in calculating the plume meander expansion factor for releases having durations that are less than or equal to PMBRKPNT001.
PMXPFAC2001	0.25	The exponential factor used in calculating the plume meander expansion factor for releases having durations that are greater than PMBRKPNT001.
Plume Rise (PR) Data		
PRSCLCRW001	1.0	Linear scaling factor on the critical wind speed used in determining if buoyant plumes will be trapped in the turbulent wake of the facility building complex. This functionality is not utilized in this analysis (scaling factor set to 1).
PRSCLADP001	1.0	Linear scaling factor on the plume rise formula used to determine the amount of plume rise that will occur when unstable or neutral atmospheric conditions occur (classes A through D). This functionality is not utilized in this analysis (scaling factor set to 1).
PRSCLEFP001	1.0	Linear scaling factor on the plume rise formula used to determine the amount of plume rise that will occur when atmospheric conditions are stable (classes E and F). This functionality is not utilized in this analysis (scaling factor set to 1).
Wake Effects (WE) Data		
SIGYINIT001	25.37	Initial σ_y value.
SIGZINIT001	29.98	Initial σ_z value.
WEBUILDH001	63.30	Building height (meters).
Release Data (RD) (Part 1 of 2)		
RDPSDIST001 to RDPSDIST009	1.0	Fraction (s) of the released material allocated to each of the particle size (deposition velocity) bins. This model utilizes a single deposition velocity, which implies a uniform particle distribution for all chemical groups (9).



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	73	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDCORINV001 to RDCORINV060	See Attachment H	Core inventory as a function of radionuclide and activity. The activity is provided in units of Ci. The software requires units of Bq. The unit conversion is done utilizing a factor of 3.7E+10 and assigning it to variable RDCORSCA001.
RDCORSCA001	3.7E+10	Unit conversion factor for radionuclides identified in the core inventory. The activity is changed from Ci to Bq units.
RDAPLFRC001	PARENT	A variable that specifies that the daughter ingrowth products are released in fractions proportional to the release fraction of the parent.
Output Control (UC) Data		
OCENDAT1001	FALSE	Boolean flag to indicate that this is not the last program in the series to be run (EARLY and CHRONC are to be run after ATMOS in this analysis).
OCIDEBUG001	0	A value of 0 is specified for this variable to specify no debug output is to be printed.
TYPE0NUMBER	0	A value of 0 is specified for this variable to specify no atmospheric results are to be printed.
Meteorological Specifications		
Meteorological Sampling (M1) Data		
M1METCOD001	2	This variable controls the specification of the weather data used by the ATMOS file. A value of 2 indicates that the weather bin sampling method is used with a separate file (See Attachment C) of hourly weather data covering a period of 1 year (8760 hr).
Boundary Weather (M2) Data		
M2LIMSPA001	10	Last spatial interval boundary (interval boundary 10, or 50 miles in this analysis) for measured weather. Beyond 50 miles (if the 120 hr of recorded weather data do not transport the last plume through the 50 mile distance) weather data is determined by variables in the M2 section.
M2BNDMXH001	1000.0	Boundary weather mixing layer height (meters).
M2IBDSTB001	4	Boundary weather stability class index (D-Stability).
M2BNDRAN001	5.0	Boundary weather rain rate (mm/hr).
M2BNDWND001	5.0	Boundary weather wind speed (m/s).
Meteorological Bin Sampling (M4) Data		
M4NRNINT001	5	Number of rain distance intervals for binning.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	74	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value	Description
M4RNDSTS001	3.22, 8.05, 16.1, 48.3, 80.5	Endpoints of the rain distance intervals (kilometers). These values must be selected from the spatial endpoint distances assigned to variables GESPAEND001 and GESPAEND002. The five values correspond to distances of 2.0, 5.0, 10.0, 30.0, and 50.0 miles, respectively.
M4NRINTN001	3	Number of rain intensity breakpoints.
M4RNRATE001	2.0, 4.0, 6.0	Rain intensity breakpoints for weather binning (millimeters/hour).
M4NSMPLS001	12	Number of samples per bin.
M4IRSEED001	79	Initial seed for random number generator.
Release Data (RD) (Part 2 of 2)		
RDATNAM2001	RC101	Descriptive text describing this particular source.
RDOALARM001	8.68E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	1.81E+04	Heat release rate (Watts).
RDPLHITE001	60.5	Release height for the plume (meters).
RDPLUDUR001	3.60E+4	Duration of the plume (seconds).
RDPDELAY001	1.44E+4	Time of release for the plume (seconds after scram).
RDRELFRC001	1.90E-03, 2.40E-05, 2.00E-05, 5.30E-05, 8.50E-06, 4.40E-05, 2.80E-07, 7.30E-07, 2.40E-05	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC201	Descriptive text describing this particular source.
RDOALARM001	8.46E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	5.68E+08	Heat release rate (Watts).
RDPLHITE001	0.839	Release height for the plume (meters).
RDPLUDUR001	1.08E+03	Duration of the plume (seconds).



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	75	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDPDELAY001	1.22E+4	Time of release for the plume (seconds after scram).
RDRELFRC001	3.60E-01, 1.00E-01, 9.50E-02, 7.60E-03, 7.80E-05, 1.10E-03, 3.40E-06, 1.70E-05, 4.10E-04	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC202	Descriptive text describing this particular source.
RDOALARM001	8.46E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	2.25E+8	Heat release rate (Watts).
RDPLHITE001	0.839	Release height for the plume (meters).
RDPLUDUR001	3.10E+04	Duration of the plume (seconds).
RDPDELAY001	1.22E+4	Time of release for the plume (seconds after scram).
RDRELFRC001	7.90E-01, 2.30E-02, 1.50E-02, 2.00E-02, 2.40E-04, 3.40E-03, 1.90E-05, 6.80E-05, 2.40E-03	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC203	Descriptive text describing this particular source.
RDOALARM001	8.46E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	2.50E+08	Heat release rate (Watts).
RDPLHITE001	0.839	Release height for the plume (meters).
RDPLUDUR001	3.10E+04	Duration of the plume (seconds).
RDPDELAY001	1.22E+4	Time of release for the plume (seconds after scram).
RDRELFRC001	8.90E-01, 5.30E-02, 2.80E-02, 1.60E-01, 1.40E-04, 6.80E-03, 1.50E-05, 2.40E-04, 2.20E-03	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC204	Descriptive text describing this particular source.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	76	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDOALARM001	8.46E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	2.60E+08	Heat release rate (Watts).
RDPLHITE001	0.839	Release height for the plume (meters).
RDPLUDUR001	2.92E+04	Duration of the plume (seconds).
RDPDELAY001	1.22E+4	Time of release for the plume (seconds after scram).
RDRELFRC001	9.50E-01, 2.80E-02, 1.60E-02, 3.60E-02, 1.70E-04, 5.30E-03, 1.40E-05, 6.20E-05, 3.20E-03	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC205	Descriptive text describing this particular source.
RDOALARM001	8.46E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	3.08E+08	Heat release rate (Watts).
RDPLHITE001	0.839	Release height for the plume (meters).
RDPLUDUR001	2.92E+04	Duration of the plume (seconds).
RDPDELAY001	1.22E+4	Time of release for the plume (seconds after scram).
RDRELFRC001	9.80E-01, 5.70E-02, 3.60E-02, 9.30E-02, 4.00E-03, 9.80E-03, 3.00E-04, 5.30E-04, 6.10E-03	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC206	Descriptive text describing this particular source.
RDOALARM001	8.53E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	77	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDPLHEAT001	2.04E+06	Heat release rate (Watts).
RDPLHITE001	0.827	Release height for the plume (meters).
RDPLUDUR001	2.48E+04	Duration of the plume (seconds).
RDPDELAY001	1.30E+04	Time of release for the plume (seconds after scram).
RDRELFRC001	1.90E-01, 5.60E-03, 5.00E-03, 9.00E-03, 1.20E-03, 7.30E-03, 5.50E-05, 1.80E-04, 4.20E-03	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC301	Descriptive text describing this particular source.
RDOALARM001	8.46E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	2.25E+8	Heat release rate (Watts).
RDPLHITE001	0.839	Release height for the plume (meters).
RDPLUDUR001	3.10E+04	Duration of the plume (seconds).
RDPDELAY001	1.22E+4	Time of release for the plume (seconds after scram).
RDRELFRC001	7.90E-01, 2.30E-02, 1.50E-02, 2.00E-02, 2.40E-04, 3.40E-03, 1.90E-05, 6.80E-05, 2.40E-03	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC302	Descriptive text describing this particular source.
RDOALARM001	8.46E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	2.50E+08	Heat release rate (Watts).
RDPLHITE001	0.839	Release height for the plume (meters).
RDPLUDUR001	3.10E+04	Duration of the plume (seconds).
RDPDELAY001	1.22E+4	Time of release for the plume (seconds after scram).



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	78	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDRELFRC001	8.90E-01, 5.30E-02, 2.80E-02, 1.60E-01, 1.40E-04, 6.80E-03, 1.50E-05, 2.40E-04, 2.20E-03	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC303	Descriptive text describing this particular source.
RDOALARM001	8.46E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	2.60E+08	Heat release rate (Watts).
RDPLHITE001	0.839	Release height for the plume (meters).
RDPLUDUR001	2.92E+04	Duration of the plume (seconds).
RDPDELAY001	1.22E+4	Time of release for the plume (seconds after scram).
RDRELFRC001	9.50E-01, 2.80E-02, 1.60E-02, 3.60E-02, 1.70E-04, 5.30E-03, 1.40E-05, 6.20E-05, 3.20E-03	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC304	Descriptive text describing this particular source.
RDOALARM001	8.46E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	3.08E+08	Heat release rate (Watts).
RDPLHITE001	0.839	Release height for the plume (meters).
RDPLUDUR001	3.10E+04	Duration of the plume (seconds).
RDPDELAY001	1.22E+4	Time of release for the plume (seconds after scram).
RDRELFRC001	9.80E-01, 5.70E-02, 3.60E-02, 9.30E-02, 4.00E-03, 9.80E-03, 3.00E-04, 5.30E-04, 6.10E-03	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC401	Descriptive text describing this particular source.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	79	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDOALARM001	8.68E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	3.73E+08	Heat release rate (Watts).
RDPLHITE001	35.7	Release height for the plume (meters).
RDPLUDUR001	1.76E+04	Duration of the plume (seconds).
RDPDELAY001	3.20E+04	Time of release for the plume (seconds after scram).
RDRELFRC001	8.00E-01, 4.60E-03, 2.30E-03, 3.40E-03, 2.70E-03, 1.50E-03, 8.00E-05, 3.40E-04, 5.20E-03	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC402	Descriptive text describing this particular source.
RDOALARM001	8.68E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	3.73E+08	Heat release rate (Watts).
RDPLHITE001	35.7	Release height for the plume (meters).
RDPLUDUR001	3.60E+4	Duration of the plume (seconds).
RDPDELAY001	3.20E+04	Time of release for the plume (seconds after scram).
RDRELFRC001	9.70E-01, 2.00E-02, 1.00E-02, 1.20E-02, 3.80E-03, 2.10E-03, 1.10E-04, 4.90E-04, 7.30E-03	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC403	Descriptive text describing this particular source.
RDOALARM001	8.68E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	80	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDPLHEAT001	3.73E+08	Heat release rate (Watts).
RDPLHITE001	35.7	Release height for the plume (meters).
RDPLUDUR001	1.76E+04	Duration of the plume (seconds).
RDPDELAY001	3.20E+04	Time of release for the plume (seconds after scram).
RDRELFRC001	8.00E-01, 4.60E-03, 2.30E-03, 3.40E-03, 2.70E-03, 1.50E-03, 8.00E-05, 3.40E-04, 5.20E-03	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC404	Descriptive text describing this particular source.
RDOALARM001	8.68E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	3.73E+08	Heat release rate (Watts).
RDPLHITE001	35.7	Release height for the plume (meters).
RDPLUDUR001	3.60E+4	Duration of the plume (seconds).
RDPDELAY001	3.20E+04	Time of release for the plume (seconds after scram).
RDRELFRC001	9.70E-01, 2.00E-02, 1.00E-02, 1.20E-02, 3.80E-03, 2.10E-03, 1.10E-04, 4.90E-04, 7.30E-03	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC501	Descriptive text describing this particular source.
RDOALARM001	8.676E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	5.03E+08	Heat release rate (Watts).
RDPLHITE001	35.7	Release height for the plume (meters).
RDPLUDUR001	3.60E+4	Duration of the plume (seconds).
RDPDELAY001	2.16E+05	Time of release for the plume (seconds after scram).



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	81	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDRELFRC001	9.90E-01, 7.70E-04, 4.00E-04, 1.70E-02, 7.40E-06, 4.40E-05, 2.20E-07, 7.00E-07, 2.40E-05	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC502	Descriptive text describing this particular source.
RDOALARM001	8.68E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	5.03E+08	Heat release rate (Watts).
RDPLHITE001	35.7	Release height for the plume (meters).
RDPLUDUR001	3.60E+4	Duration of the plume (seconds).
RDPDELAY001	2.16E+05	Time of release for the plume (seconds after scram).
RDRELFRC001	9.90E-01, 7.70E-04, 4.00E-04, 1.70E-02, 7.40E-06, 4.40E-05, 2.20E-07, 7.00E-07, 2.40E-05	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC503	Descriptive text describing this particular source.
RDOALARM001	8.676E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	3.20E+09	Heat release rate (Watts).
RDPLHITE001	35.7	Release height for the plume (meters).
RDPLUDUR001	3.60E+4	Duration of the plume (seconds).
RDPDELAY001	3.02E+05	Time of release for the plume (seconds after scram).
RDRELFRC001	1.00E+00, 4.10E-04, 6.90E-05, 5.10E-05, 8.50E-06, 4.40E-05, 2.80E-07, 7.30E-07, 2.40E-05	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC504	Descriptive text describing this particular source.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	82	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDOALARM001	8.68E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	3.20E+09	Heat release rate (Watts).
RDPLHITE001	35.7	Release height for the plume (meters).
RDPLUDUR001	3.60E+4	Duration of the plume (seconds).
RDPDELAY001	3.02E+05	Time of release for the plume (seconds after scram).
RDRELFRC001	1.00E+00, 4.10E-04, 6.90E-05, 5.10E-05, 8.50E-06, 4.40E-05, 2.80E-07, 7.30E-07, 2.40E-05	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC602	Descriptive text describing this particular source.
RDOALARM001	8.68E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	5.03E+08	Heat release rate (Watts).
RDPLHITE001	35.7	Release height for the plume (meters).
RDPLUDUR001	3.60E+4	Duration of the plume (seconds).
RDPDELAY001	2.16E+05	Time of release for the plume (seconds after scram).
RDRELFRC001	9.90E-01, 7.70E-04, 4.00E-04, 1.70E-02, 7.40E-06, 4.40E-05, 2.20E-07, 7.00E-07, 2.40E-05	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC701	Descriptive text describing this particular source.
RDOALARM001	4.21E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	83	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDPLHEAT001	1.36E+07	Heat release rate (Watts).
RDPLHITE001	24.75	Release height for the plume (meters).
RDPLUDUR001	2.41E+04	Duration of the plume (seconds).
RDPDELAY001	1.19E+04	Time of release for the plume (seconds after scram).
RDRELFRC001	1.10E-01, 4.20E-03, 4.40E-03, 6.90E-03, 6.00E-04, 4.80E-03, 2.20E-05, 1.10E-04, 2.70E-03	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC702	Descriptive text describing this particular source.
RDOALARM001	4.21E+03	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	1.36E+07	Heat release rate (Watts).
RDPLHITE001	24.75	Release height for the plume (meters).
RDPLUDUR001	2.41E+04	Duration of the plume (seconds).
RDPDELAY001	1.19E+04	Time of release for the plume (seconds after scram).
RDRELFRC001	1.10E-01, 8.40E-02, 8.70E-02, 1.40E-01, 1.20E-02, 9.60E-02, 4.50E-04, 2.20E-03, 5.40E-02	Plume release fraction for each of the 9 chemical groups.
RDATNAM2001	RC802	Descriptive text describing this particular source.
RDOALARM001	2.42E+04	Time at which notification is given to off-site emergency response officials (seconds after scram).
RDNUMREL001	1	Number of plumes modeled.
RDMAXRIS001	1	Risk-dominant plume.
RDREFTIM001	0.5	Representative time point for dispersion and radioactive decay for the plume. A value of 0.5 corresponds to the midpoints of the plume.
RDPLHEAT001	2.36E+08	Heat release rate (Watts).
RDPLHITE001	30.6	Release height for the plume (meters).
RDPLUDUR001	2.02E+04	Duration of the plume (seconds).
RDPDELAY001	2.84E+04	Time of release for the plume (seconds after scram).



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	84	of 105

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

Table 5.1.1.4-1 U.S. EPR ATMOS Input Parameter Specification

Variable Name	Value	Description
RDRELFRC001	9.80E-01, 7.10E-01, 6.90E-01, 6.40E-01, 1.30E-01, 5.70E-01, 3.90E-03, 2.20E-02, 3.80E-01	Plume release fraction for each of the 9 chemical groups.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	85	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

5.1.2 EARLY Input Parameters (Attachment E.2, All Reactor Technologies)

Table 5.1.2-1 EARLY Input Parameter Specification

Variable Name	Value	Description
DOSE CONVERSION FILE DATA		
DCF_FILE001	C:\MACCS2\DOSDATA\I NP	Dose conversion factor filename and filepath.
Miscellaneous (MI) Data		
MIEANAM1001	GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS	The title of the EARLY input file.
MIENDAT2001	FALSE	Control flag that allows the user to execute only the ATMOS and EARLY modules while skipping execution of the CHRONC module. A value of FALSE indicates CHRONC file will be run as well.
MIPLUME001	2	Dispersion model corresponding to wind-shift dispersion model.
MINUMFIN001	7	Number of fine grid subdivisions used by the model.
MIIPRINT001	0	A value of 0 indicates that no debugging output is required.
MIRISCAT001	FALSE	A flag is selected to not print the risk contribution tables.
MIOVRRID001	FALSE	A flag that specifies that the wind rose probabilities are supplied via ATMOS.
ORGAN DEFINITION (OD) DATA		
MIORGDEF001 TO MIORGDEF016	TRUE	Flag to indicate that all 16 organs are included in the EARLY calculations. Reducing the number of organs considered saves computational time, which does not have a great impact on the computer system used for this analysis.
Population Distribution (PD) Data		
PDPOPFLG001	FILE	A flag that indicates population data is provided in a separate file.
Shielding and Exposure (SE) Data		
SECSFACT001	1, 0.75, 0.6	Cloudshine shielding factors for evacuation, normal activity, and sheltering, respectively.
SEPROTIN001	1, 0.75, 0.6	Inhalation protection factors for evacuation, normal activity, and sheltering, respectively.
SEBRRATE001	0.000266, 0.000266, 0.000266	Breathing rates for evacuation, normal activity, and sheltering, respectively (m ³ /s).
SESKPFAC001	1, 0.41, 0.33	Skin protection factors for evacuation, normal activity, and sheltering, respectively.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	86	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.2-1 EARLY Input Parameter Specification

Variable Name	Value	Description
SEGSHFAC001	0.5, 0.33, 0.2	Groundshine shielding factors for evacuation, normal activity, and sheltering, respectively.
SERESCON001	1.0E-04	Initial value for emergency-phase resuspension concentration factor (s/m).
SERESHAF001	1.82E05	The half-life (seconds) of the resuspension concentration coefficient.
Evacuation Zone (EZ) Data		
EZEANAM2001	95% EVACUATION	The title of the emergency response scenario being studied.
EZWTNAME001	PEOPLE	The type of weighting to be used in generating the overall weighted sum of results (PEOPLE, TIME, or SUMPOP).
EZWTFRAC001	0.95	Weighting fraction to be applied to the results from the emergency response scenario (fraction evacuated).
EZLASMOV001	6	The outermost interval boundary of the evacuation movement zone (corresponds to 10 miles, see ATMOS inputs).
TRAVELPOINT	BOUNDARY	When considering evacuation time based on travel speed and distance, a travel distance for a node is the difference between the radii to the spatial element's inner and outer boundaries.
EZESPEED001	2.8, 2.8, 2.8	The travel speed of evacuees during the three phases of the evacuation (initial, middle, and late).
EZEVATYP001	RADIAL	Evacuation is based on a radial evacuation.
EZDURBEG001	86400.0	The duration (seconds) of the early phase of evacuation.
EZDURMID001	0.0	The duration (seconds) of the middle phase of evacuation.
EZREFPNT001	ALARM	Control flag indicating that the initiation of sheltering and evacuation actions will occur at the off-site alarm time (ATMOS input variable).
EZNUMEVA001	6	The number of concentric rings in which evacuation and/or sheltering can occur for the resident population.
EZDLTSHL001	3900, 3900, 3900, 3900, 3900, 3900	For each distance ring in the shelter/evacuate region, this variable defines the delay to take shelter (seconds) for resident individuals.
EZDLTEVA001	0, 0, 0, 0, 0, 0	For each distance ring in the shelter/evacuate region, this variable defines the delay from shelter to evacuation (seconds).
Dispersion Parameter (DP) Data		
SRENDEMP001	604800	The duration of the emergency-phase period (seconds).



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	87	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.2-1 EARLY Input Parameter Specification

Variable Name	Value	Description
SRCRIORG001	L-EDEWBODY	The critical organ for relocation decisions during the emergency phase period considered by EARLY.
SRTIMHOT001	43200.	The hot-spot relocation action time (seconds after plume arrival).
SRTIMNRM001	86400.	Normal relocation action time (seconds after plume arrival).
SRDOSHOT001	0.01	Hot-spot relocation dose threshold (Sieverts).
SRDOSNRM001	0.01	Normal relocation dose threshold (Sieverts).
Early Fatality (EF) Data		
EFNUMEFA001	3	The number of early fatality effects to be included in the total risk of early fatality.
EFATAGRP001/ ORGNAM	A-RED MARR	The name of the target organ for this early fatality effect.
EFATAGRP001/ EFFACA	3.8	The alpha factor (LD50) in the hazard function for the target organ (red marrow).
EFATAGRP001/ EFFACB	5.0	The beta factor (shape parameter) in the hazard function for the target organ (red marrow).
EFATAGRP001/ EFFTHR	1.5	The threshold dose associated with the target organ (red marrow).
EFATAGRP002	A-LUNGS	The name of the target organ for this early fatality effect.
EFATAGRP002/ EFFACA	10.0	The alpha factor (LD50) in the hazard function for the target organ (lungs).
EFATAGRP002/ EFFACB	7.0	The beta factor (shape parameter) in the hazard function for the target organ (lungs).
EFATAGRP002/ EFFTHR	5.0	The threshold dose associated with the target organ (lungs).
EFATAGRP003	A-LOWER LI	The name of the target organ for this early fatality effect.
EFATAGRP003/ EFFACA	15.0	The alpha factor (LD50) in the hazard function for the target organ (lower large intestine).
EFATAGRP003/ EFFACB	10.0	The beta factor (shape parameter) in the hazard function for the target organ (lower large intestine).
EFATAGRP003/ EFFTHR	8.0	The threshold dose associated with the target organ (lower large intestine).
Latent Cancer (LC) Data		
LCNUMACA001	7	The number of different types of latent cancer effects that will be calculated.
LCDDTHRE001	0.2	The lower dose limit for the linear dose-response relationship.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	88	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.2-1 EARLY Input Parameter Specification

Variable Name	Value	Description
LCACTHRE001	0	The threshold dose for applying the dose-dependent reduction factor.
LCANCERS001/ ACNAME	LEUKEMIA	The type of latent cancer effect.
LCANCERS001/ ORGNAM	L-RED MARR	The name of the target organ for each type of latent cancer effect.
LCANCERS001/ ACSUSC	1.0	The fraction of the population that is susceptible to the latent cancer.
LCANCERS001/ DOSEFA	1.0	The linear factor, alpha, of the dose dependence in the cancer risk model.
LCANCERS001/ DOSEFB	0.0	The quadratic factor, beta, of the dose dependence in the cancer risk model.
LCANCERS001/ CFRISK	9.70E-3	Lifetime risk factor for cancer death.
LCANCERS001/ CIRISK	0.0	Lifetime risk factor for cancer injury.
LCANCERS001/ CIRISK	2.0	Dose-dependent reduction factor.
LCANCERS002/ ACNAME	BONE	The type of latent cancer effect.
LCANCERS002/ ORGNAM	L-BONE SUR	The name of the target organ for each type of latent cancer effect.
LCANCERS002/ ACSUSC	1.0	The fraction of the population that is susceptible to the latent cancer.
LCANCERS002/ DOSEFA	1.0	The linear factor, alpha, of the dose dependence in the cancer risk model.
LCANCERS002/ DOSEFB	0.0	The quadratic factor, beta, of the dose dependence in the cancer risk model.
LCANCERS002/ CFRISK	1.20E-4	Lifetime risk factor for cancer death.
LCANCERS002/ CIRISK	0.0	Lifetime risk factor for cancer injury.
LCANCERS002/ CIRISK	2.0	Dose-dependent reduction factor.
LCANCERS003/ ACNAME	BREAST	The type of latent cancer effect.
LCANCERS003/ ORGNAM	L-BREAST	The name of the target organ for each type of latent cancer effect.
LCANCERS003/ ACSUSC	1.0	The fraction of the population that is susceptible to the latent cancer.
LCANCERS003/ DOSEFA	1.0	The linear factor, alpha, of the dose dependence in the cancer risk model.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	89	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.2-1 EARLY Input Parameter Specification

Variable Name	Value	Description
LCANCERS003/ DOSEFB	0.0	The quadratic factor, beta, of the dose dependence in the cancer risk model.
LCANCERS003/ CFRISK	5.40E-3	Lifetime risk factor for cancer death.
LCANCERS003/ CIRISK	1.7E-2	Lifetime risk factor for cancer injury.
LCANCERS003/ CIRISK	1.0	Dose-dependent reduction factor.
LCANCERS004/ ACNAME	LUNG	The type of latent cancer effect.
LCANCERS004/ ORGNAM	L-LUNGS	The name of the target organ for each type of latent cancer effect.
LCANCERS004/ ACSUSC	1.0	The fraction of the population that is susceptible to the latent cancer.
LCANCERS004/ DOSEFA	1.0	The linear factor, alpha, of the dose dependence in the cancer risk model.
LCANCERS004/ DOSEFB	0.0	The quadratic factor, beta, of the dose dependence in the cancer risk model.
LCANCERS004/ CFRISK	1.55E-2	Lifetime risk factor for cancer death.
LCANCERS004/ CIRISK	0.0	Lifetime risk factor for cancer injury.
LCANCERS004/ CIRISK	2.0	Dose-dependent reduction factor.
LCANCERS005/ ACNAME	THYROID	The type of latent cancer effect.
LCANCERS005/ ORGNAM	L-THYROIDH	The name of the target organ for each type of latent cancer effect.
LCANCERS005/ ACSUSC	1.0	The fraction of the population that is susceptible to the latent cancer.
LCANCERS005/ DOSEFA	1.0	The linear factor, alpha, of the dose dependence in the cancer risk model.
LCANCERS005/ DOSEFB	0.0	The quadratic factor, beta, of the dose dependence in the cancer risk model.
LCANCERS005/ CFRISK	7.2E-4	Lifetime risk factor for cancer death.
LCANCERS005/ CIRISK	7.2E-3	Lifetime risk factor for cancer injury.
LCANCERS005/ CIRISK	1.0	Dose-dependent reduction factor.
LCANCERS006/ ACNAME	GI	The type of latent cancer effect.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	90	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.2-1 EARLY Input Parameter Specification

Variable Name	Value	Description
LCANCERS006/ ORGNAM	L-LOWER LI	The name of the target organ for each type of latent cancer effect.
LCANCERS006/ ACSUSC	1.0	The fraction of the population that is susceptible to the latent cancer.
LCANCERS002/ DOSEFA	1.0	The linear factor, alpha, of the dose dependence in the cancer risk model.
LCANCERS006/ DOSEFB	0.0	The quadratic factor, beta, of the dose dependence in the cancer risk model.
LCANCERS006/ CFRISK	3.36E-2	Lifetime risk factor for cancer death.
LCANCERS006/ CIRISK	0.0	Lifetime risk factor for cancer injury.
LCANCERS006/ CIRISK	2.0	Dose-dependent reduction factor.
LCANCERS007/ ACNAME	OTHER	The type of latent cancer effect.
LCANCERS007/ ORGNAM	L-EDEWBODY	The name of the target organ for each type of latent cancer effect.
LCANCERS007/ ACSUSC	1.0	The fraction of the population that is susceptible to the latent cancer.
LCANCERS007/ DOSEFA	1.0	The linear factor, alpha, of the dose dependence in the cancer risk model.
LCANCERS007/ DOSEFB	0.0	The quadratic factor, beta, of the dose dependence in the cancer risk model.
LCANCERS007/ CFRISK	2.76E-2	Lifetime risk factor for cancer death.
LCANCERS007/ CIRISK	0.0	Lifetime risk factor for cancer injury.
LCANCERS007/ CIRISK	2.0	Dose-dependent reduction factor.
Result (Type 1) Specification		
TYPE1NUMBE R	5	The number of results of Type 1 to be calculated.
TYPE1OUT001/ NAME	CAN FAT/TOTAL	The name of this Type 1 result (total cases of cancer death).
TYPE1OUT001/ I1DIS1	1	The inner spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 0 miles (inner)).
TYPE1OUT001/ I2DIS1	10	The outer spatial interval boundary of the region of interest for this result (interval boundary 10 corresponds to 50 miles (outer)).



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	91	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.2-1 EARLY Input Parameter Specification

Variable Name	Value	Description
TYPE1OUT002/ NAME	CAN FAT/TOTAL	The name of this Type 1 result (total cases of cancer death).
TYPE1OUT002/ I1DIS1	1	The inner spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 0 miles (inner)).
TYPE1OUT002/ I2DIS1	6	The outer spatial interval boundary of the region of interest for this result (interval boundary 6 corresponds to 10 miles (outer)).
TYPE1OUT003/ NAME	ERL FAT/TOTAL	The name of this Type 1 result (total cases of early fatality).
TYPE1OUT003/ I1DIS1	1	The inner spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 0 miles (inner)).
TYPE1OUT003/ I2DIS1	10	The outer spatial interval boundary of the region of interest for this result (interval boundary 10 corresponds to 50 miles (outer)).
TYPE1OUT004/ NAME	ERL FAT/TOTAL	The name of this Type 1 result (total cases of early fatality).
TYPE1OUT004/ I1DIS1	1	The inner spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 0 miles (inner)).
TYPE1OUT004/ I2DIS1	2	The outer spatial interval boundary of the region of interest for this result (interval boundary 2 corresponds to 2 miles (outer)).
TYPE1OUT005/ NAME	ERL FAT/TOTAL	The name of this Type 1 result (total cases of early fatality).
TYPE1OUT005/ I1DIS1	1	The inner spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 0 miles (inner)).
TYPE1OUT005/ I2DIS1	1	The outer spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 1 mile (outer)).
Result (Type 2) Specification		
TYPE2NUMBE R	0	The number of results of this type to be calculated. It is set to 0 since the greatest distance at which a specified level of early fatality risk is exceeded is not of interest for this analysis (not calculated).
Result (Type 3) Specification		
TYPE3NUMBE R	2	The number of results of this type to be calculated. There are 2 dose threshold levels above which the number of fatalities is to be calculated.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	92	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.2-1 EARLY Input Parameter Specification

Variable Name	Value	Description
TYPE3OUT001/ NAME	L-EDEWBODY	The name of the organ to which the population dose applies.
TYPE3OUT001/ DOSTH3	2.0	The dose threshold that will be used for counting the population (Sieverts).
TYPE3OUT002/ NAME	L-EDEWBODY	The name of the organ to which the population dose applies.
TYPE3OUT002/ DOSTH3	0.25	The dose threshold that will be used for counting the population (Sieverts).
Result (Type 4) Specification		
TYPE4NUMBE R	0	The number of results of this type to be calculated. It is set to 0 since the average individual risk is not of interest for this analysis (not calculated).
Result (Type 5) Specification		
TYPE5NUMBE R	2	The number of results of this type to be calculated.
TYPE5OUT001/ NAME	L-EDEWBODY	The name of the organ to which the population dose applies.
TYPE5OUT001/ I1DIS5	1	The inner spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 0 miles (inner)).
TYPE5OUT001/ I2DIS5	6	The outer spatial interval boundary of the region of interest for this result (interval boundary 6 corresponds to 10 miles (outer)).
TYPE5OUT002/ NAME	L-EDEWBODY	The name of the organ to which the population dose applies.
TYPE5OUT002/ I1DIS5	1	The inner spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 0 miles (inner)).
TYPE5OUT002/ I2DIS5	10	The outer spatial interval boundary of the region of interest for this result (interval boundary 10 corresponds to 50 miles (outer)).
Result (Type 6) Specification		
TYPE6NUMBE R	0	The number of results of this type to be calculated. It is set to 0 since the centerline dose vs. distance is not of interest for this analysis (not calculated).
Result (Type 7) Specification		
TYPE7NUMBE R	0	The number of results of this type to be calculated. It is set to 0 since the centerline risk vs. distance is not of interest for this analysis (not calculated).
Result (Type 8) Specification		



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	93	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.2-1 EARLY Input Parameter Specification

Variable Name	Value	Description
TYPE7NUMBE R	6	The number of results of this type to be calculated
TYPE8OUT001/ NAME	ERL FAT/TOTAL	The name of the Type 8 results to be calculated: population weighted risk of a given type of health effect (total cases of early fatality).
TYPE8OUT001/ I1DIS8	1	The inner spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 0 miles (inner)).
TYPE8OUT001/ I2DIS8	10	The outer spatial interval boundary of the region of interest for this result (interval boundary 10 corresponds to 50 miles (outer)).
TYPE8OUT002/ NAME	ERL FAT/TOTAL	The name of the Type 8 results to be calculated: population weighted risk of a given type of health effect (total cases of early fatality).
TYPE8OUT002/ I1DIS8	1	The inner spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 0 miles (inner)).
TYPE8OUT002/ I2DIS8	2	The outer spatial interval boundary of the region of interest for this result (interval boundary 2 corresponds to 2 miles (outer)).
TYPE8OUT003/ NAME	ERL FAT/TOTAL	The name of the Type 8 results to be calculated: population weighted risk of a given type of health effect (total cases of early fatality).
TYPE8OUT003/ I1DIS8	1	The inner spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 0 miles (inner)).
TYPE8OUT003/ I2DIS8	1	The outer spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 1 mile (outer)).
TYPE8OUT004/ NAME	ERL FAT/TOTAL	The name of the Type 8 results to be calculated: population weighted risk of a given type of health effect (total cases of early fatality).
TYPE8OUT004/ I1DIS8	3	The inner spatial interval boundary of the region of interest for this result (interval boundary 3 corresponds to 2 miles (inner)).
TYPE8OUT004/ I2DIS8	3	The outer spatial interval boundary of the region of interest for this result (interval boundary 3 corresponds to 3 miles (outer)).
TYPE8OUT005/ NAME	CAN FAT/TOTAL	The name of the Type 8 results to be calculated: population weighted risk of a given type of health effect (total cases of cancer death).



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	94	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.2-1 EARLY Input Parameter Specification

Variable Name	Value	Description
TYPE8OUT005/ I1DIS8	1	The inner spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 0 miles (inner)).
TYPE8OUT005/ I2DIS8	10	The outer spatial interval boundary of the region of interest for this result (interval boundary 10 corresponds to 50 miles (outer)).
TYPE8OUT006/ NAME	CAN FAT/TOTAL	The name of the Type 8 results to be calculated: population weighted risk of a given type of health effect (total cases of cancer death).
TYPE8OUT006/ I1DIS8	1	The inner spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 0 miles (inner)).
TYPE8OUT006/ I2DIS8	6	The outer spatial interval boundary of the region of interest for this result (interval boundary 6 corresponds to 10 miles (outer)).
Result (Type A) Specification		
TYPEANUMBE R	1	The number of results of this type to be calculated.
TYPEAOUT001/ NAME	L-EDEWBODY	The name of the organ for this dose measure.
TYPEAOUT001/ I1DISA	1	The inner spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 0 miles (inner)).
TYPEAOUT001/ I2DISA	1	The outer spatial interval boundary of the region of interest for this result (interval boundary 1 corresponds to 1 mile (outer)).
TYPEAOUT001/ -	CCDF	An option to print the consequence results for this organ in the form of a complementary cumulative distribution function is selected.
Result (Type B) Specification		
TYPEBNUMBE R	0	The number of results of this type to be calculated. It is set to 0 since the centerline dose vs. distance is not of interest for this analysis (not calculated).
Evacuation Zone (EZ) Data – Scenario 2		
EZEANAM2001	NO EVACUATION	The title of the emergency response scenario being studied.
EZWTFRAC001	0.05	Weighting fraction to be applied to the results from the emergency response scenario (fraction relocated, no evacuation).
EZLASMOV001	0	The outermost spatial interval boundary of the evacuation movement zone. A value of 0 indicated no evacuation model is utilized.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	95	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

5.1.3 CHRONC Input Parameters (Attachment E.3, All Reactor Technologies)

Table 5.1.3-1 CHRONC Input Parameter Specification

Variable Name	Value	Description
DOSE CONVERSION FILE DATA		
DCF_FILE001	C:\MACCS2\DOSDATA.I NP	Dose conversion factor filename and filepath.
Problem Identification Data		
CHCHNAME001	GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE	The title of the CHRONC input file.
Emergency-Response Cost Data		
CHEVACST001	53.19	The daily cost of compensation for evacuees and short-term relocatees who are removed from their homes as a result of radiation exposure during the emergency-phase period (\$/person-day).
CHRELCST001	53.19	The daily cost of compensation for individuals removed from their homes due to intermediate-phase relocation.
Long-Term Protective Action Data		
DUR_INTPHAS	0.0	The duration of the intermediate-phase period (seconds).
CHTMPACT001	1.58E8	The long-term dose projection period (seconds).
CHDSCRTI001	1.0E5	The intermediate-phase dose criterion (Sieverts).
CHDSCRLT001	0.03	The long-term phase dose criterion (Sieverts).
CHCRTOCR001	L-EDEWBODY	The long-term phase critical organ.
CHEXPTIM001	1.58E9	The duration of the long-term exposure period considered by CHRONC (seconds).
Decontamination Plan Data		
CHLVLDEC001	2	The number of decontamination levels that can be utilized.
CHTIMDEC001	5.184E6, 1.0368E7	The time required for completion of each of the decontamination levels (seconds).
CHDSRFCT001	3, 15	Dose reduction factors for the decontamination levels.
CHCDFRM0001	1109, 2463	Defines the farmland decontamination cost for the two levels of decontamination.
CHCDNFRM001	5910, 15760	Defines the nonfarmland decontamination cost for the two levels of decontamination.
CHFRFDL0001	.3, .35	The fraction of the farmland decontamination cost that is due to labor (for each decontamination level).



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	96	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.3-1 CHRONC Input Parameter Specification

Variable Name	Value	Description
CHFRNFDL001	.7, .5	The fraction of the nonfarmland decontamination cost that is due to labor (for each decontamination level).
CHTFWK001	.10, .33	The fraction of the decontamination period that a farmland decontamination worker spends in the contaminated area (for each decontamination level).
CHTFWKNF001	.33, .33	The fraction of the decontamination period that a nonfarmland decontamination worker spends in the contaminated area during the decontamination period (for each decontamination level).
CHDLBCST001	68950.	The labor cost of a decontamination worker (dollars/man-year)
Interdiction Plan Cost Data		
CHDPRATE001	0.20	The depreciation rate that applies to property improvements during a period of interdiction (1/year).
CHDSRATE001	0.07	The expected rate of return from land, buildings, equipment, etc (1/year).
CHPOPCST001	9850	The per capita removal cost for temporary or permanent relocation of population and businesses in a region rendered uninhabitable during the long-term phase time period (dollars/person).
Groundshine Weathering Data		
CHNGWTRM001	2	The number of terms in the groundshine weathering relationship.
CHGWCOEF001	0.5, 0.5	The coefficients in the groundshine weathering equation.
CHTGWHLF001	1.6E7, 2.8E9	The half-lives in the groundshine weathering equation.
Resuspension Weathering Data		
CHNRWTRM001	3	The number of terms in the resuspension weathering relationship.
CHRWCOEF001	1.0E-5, 1.0E-7, 1.0E-9	The coefficients in the resuspension weathering equation (1/meter).
CHTRWHLF001	1.6E7, 1.6E8, 1.6E9	The half-lives in the resuspension weathering equation (seconds).
Regional Characteristics Data		
CHFRACLD001	0.95	Since site data file is supplied separately (Attachment D), this parameter is not used. A dummy variable is supplied as required.
CHFRCFRM001	0.382	Since site data file is supplied separately (Attachment D), this parameter is not used. A dummy variable is supplied as required.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	97	of	105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.3-1 CHRONC Input Parameter Specification

Variable Name	Value	Description
CHFRMPRD001	371.0	Since site data file is supplied separately (Attachment D), this parameter is not used. A dummy variable is supplied as required.
CHDPFRCT001	0.198	Since site data file is supplied separately (Attachment D), this parameter is not used. A dummy variable is supplied as required.
CHVALWF0001	16636.	The value of farm wealth in the region (dollars/hectare).
CHFRFIM0001	0.25	The fraction of farm wealth in the region due to improvements.
CHVALWNF001	275924.	The value of the nonfarm wealth in the region (dollars/person).
CHFRNFIM001	0.8	The fraction of nonfarm wealth in the region due to improvements.
Food Ingestion Model		
CHFDPATH001	NEW	A value of "NEW" for this variable specifies that the CHROCN analysis will utilize the new COMIDA2-based food ingestion model.
BIN_FILE001	C:\MACCS2\SAMP_A.BIN	The file path of the COMIDA2 file supplied with the software.
DOSEMILK001	0.0025, 0.025	The maximum allowable food ingestion dose from milk crops during the year of the accident. The first value is for the effective dose, and the second for thyroid dose.
DOSEOTHR001	0.0025, 0.025	The maximum allowable food ingestion dose from nonmilk crops during the year of the accident. The first value is for the effective dose, and the second for thyroid dose.
DOSELONG001	0.005, 0.050	The maximum allowable "long-term" annual dose to an individual from ingestion of the <i>combination</i> of milk and nonmilk crops (Sieverts). The first value is for the effective dose, and the second for thyroid dose.
CHNUMWPI001	4	The number of radionuclides to be considered in the drinking water pathway.
CHWTRISO001/ NAMWPI	Sr-89	The name of a radionuclide number 1 used in the drinking water pathway.
CHWTRISO001/ WSHFRI	0.01	The initial washoff fraction for the specified radionuclide number 1.
CHWTRISO001/ WSHRTA	0.004	The annual washoff rate for the specified radionuclide number 1.
CHWTRISO001/ WINGF	5.0E-6	The water ingestion factor for number 1.
CHWTRISO002/ NAMWPI	Sr-90	The name of a radionuclide number 2 used in the drinking water pathway.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	98	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.3-1 CHRONC Input Parameter Specification

Variable Name	Value	Description
CHWTRISO002/ WSHFRI	0.01	The initial washoff fraction for the specified radionuclide number 2.
CHWTRISO002/ WSHRTA	0.004	The annual washoff rate for the specified radionuclide number 2.
CHWTRISO002/ WINGF	5.0E-6	The water ingestion factor for number 2.
CHWTRISO003/ NAMWPI	Cs-134	The name of a radionuclide number 3 used in the drinking water pathway.
CHWTRISO003/ WSHFRI	0.005	The initial washoff fraction for the specified radionuclide number 3.
CHWTRISO003/ WSHRTA	0.001	The annual washoff rate for the specified radionuclide number 3.
CHWTRISO003/ WINGF	5.0E-6	The water ingestion factor for number 3.
CHWTRISO004/ NAMWPI	Cs-137	The name of a radionuclide number 4 used in the drinking water pathway.
CHWTRISO004/ WSHFRI	0.005	The initial washoff fraction for the specified radionuclide number 4.
CHWTRISO004/ WSHRTA	0.001	The annual washoff rate for the specified radionuclide number 4.
CHWTRISO004/ WINGF	5.0E-6	The water ingestion factor for number 4.
Diagnostic Trace Option		
CHKSWTCH001	0	A value of 0 for this variable disables the generation and printing of intermediate calculations on the output listing.
Population Dose Results		
TYPE9NUMBE R	2	Number of long-term population dose results to be printed.
TYPE9OUT001/ ORGNAM	L-EDEWBODY	The name of the first organ for which the long -term dose breakdown is to be reported.
TYPE9OUT001/ IX1DS9	1	The inner spatial interval boundary of the region of interest (interval boundary 1 corresponds to 0 miles (inner)).
TYPE9OUT001/ IX2DS9	6	The outer spatial interval boundary of the region of interest (interval boundary 6 corresponds to 10 miles (outer)).
TYPE9OUT001/ ORGNAM	L-EDEWBODY	The name of the second organ for which the long -term dose breakdown is to be reported.
TYPE9OUT001/ IX1DS9	1	The inner spatial interval boundary of the region of interest (interval boundary 1 corresponds to 0 miles (inner)).



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	99	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Table 5.1.3-1 CHRONC Input Parameter Specification

Variable Name	Value	Description
TYPE9OUT001/ IX2DS9	10	The outer spatial interval boundary of the region of interest (interval boundary 10 corresponds to 50 miles (outer)).
Economic Cost Results		
TYP10NUMBER	1	Number of economic cost results to be printed.
TYPE9OUT001/ IX1DS10	1	The inner spatial interval boundary of the region of interest (interval boundary 1 corresponds to 0 miles (inner)).
TYPE9OUT001/ IX2D10	10	The outer spatial interval boundary of the region of interest (interval boundary 10 corresponds to 50 miles (outer)).
Action Distance Results		
TYP11FLAG11	FALSE	A value of FALSE for this variable I specified to avoid printing eight maximum action distance results.
Impacted Area/Population Results		
TYP12NUMBER	1	Number of impacted area/population results to be printed.
TYPE12OUT00 1/ IX1DS12	1	The inner spatial interval boundary of the region of interest (interval boundary 1 corresponds to 0 miles (inner)).
TYPE12UT001/ IX2D12	10	The outer spatial interval boundary of the region of interest (interval boundary 10 corresponds to 50 miles (outer)).
Maximum Individual Food Ingestion Dose at a Distance		
TYP13NUMBER	0	A value of 0 specifies that no results are printed for this type of result.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	100	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

6 RESULTS

Tables 6-1 and 6-2 contain the results of this analysis.



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	101 of 105
Safety Related	X	Non-Safety Related	
Prepared by			
Reviewed by			
Approved by			
Client PSEG Nuclear Development			
Project PSEG ESPA			
Proj. No. 12380-001			
Equip. No.			

Table 6-1 Environmental Consequence Results

Release Category	Population Dose		Number of Fatalities (Population Weighted)	Late	25 (rem)	200 (rem)	Economics Cost (Dollars)	Farm Land Requiring Decontamination Area (Hectares)
	Water Ingestion (Person-Sv)	Total (Person-Sv)						
ABWR (4005 MWt)								
NCL	9.53E-02	1.50E+02	0.00E+00	6.70E+00	0.00E+00	0.00E+00	2.48E+05	6.55E+00
Case 1	6.13E-04	7.96E+01	0.00E+00	3.31E+00	0.00E+00	0.00E+00	7.10E+05	0.00E+00
Case 2	2.04E-02	1.10E+02	0.00E+00	4.67E+00	0.00E+00	0.00E+00	1.08E+06	1.42E-01
Case 3	1.16E+00	1.89E+03	0.00E+00	8.43E+01	0.00E+00	0.00E+00	6.51E+07	2.91E+02
Case 4	6.53E+00	7.04E+03	0.00E+00	3.11E+02	0.00E+00	0.00E+00	7.30E+08	2.90E+03
Case 5	2.45E+01	1.50E+04	0.00E+00	6.64E+02	0.00E+00	0.00E+00	3.82E+09	1.11E+04
Case 6	1.28E+02	3.55E+04	0.00E+00	1.58E+03	1.89E+00	0.00E+00	1.82E+10	3.90E+04
Case 7	3.69E+02	5.16E+04	0.00E+00	2.30E+03	8.07E-04	6.90E-04	3.39E+10	5.39E+04
Case 8	7.76E+02	7.51E+04	1.96E-05	3.39E+03	4.80E+02	1.05E-01	5.39E+10	6.79E+04
Case 9	1.53E+03	9.40E+04	3.59E-04	4.28E+03	1.61E+03	9.16E-01	8.14E+10	7.95E+04
ABWR (4300 MWt)								
NCL	1.02E-01	1.61E+02	0.00E+00	7.19E+00	0.00E+00	0.00E+00	2.56E+06	7.75E+00
Case 1	6.58E-04	8.55E+01	0.00E+00	3.56E+00	0.00E+00	0.00E+00	7.31E+05	0.00E+00
Case 2	2.19E-02	1.18E+02	0.00E+00	5.01E+00	0.00E+00	0.00E+00	1.14E+06	2.44E-01
Case 3	1.24E+00	2.03E+03	0.00E+00	9.01E+01	0.00E+00	0.00E+00	6.97E+07	3.14E+02
Case 4	7.01E+00	7.32E+03	0.00E+00	3.24E+02	3.49E-05	0.00E+00	8.62E+08	3.35E+03
Case 5	2.63E+01	1.54E+04	0.00E+00	6.81E+02	2.04E-03	0.00E+00	4.17E+09	1.18E+04
Case 6	1.38E+02	3.66E+04	0.00E+00	1.63E+03	2.54E+00	0.00E+00	1.89E+10	3.95E+04
Case 7	3.96E+02	5.36E+04	0.00E+00	2.39E+03	8.93E+00	1.49E-03	3.51E+10	5.46E+04
Case 8	8.33E+02	7.76E+04	3.84E-05	3.51E+03	8.84E+02	1.37E-01	5.61E+10	6.92E+04
Case 9	1.65E+03	9.64E+04	5.87E-04	4.40E+03	2.22E+03	1.04E+00	8.51E+10	8.03E+04
AP1000								
IC	1.05E-01	1.05E+02	0.00E+00	4.69E+00	0.00E+00	0.00E+00	1.18E+06	1.08E+01
CHE	2.12E+02	4.00E+04	1.48E-06	1.90E+03	4.75E+01	1.19E-01	2.29E+10	4.35E+04
CFI	1.42E+02	5.32E+04	0.00E+00	2.09E+03	2.84E+02	2.24E-01	3.23E+10	7.96E+04
CFL	1.73E+01	5.90E+04	0.00E+00	2.21E+03	0.00E+00	0.00E+00	6.14E+10	1.11E+05
CI	1.97E+02	4.06E+04	0.00E+00	2.35E+03	1.29E+03	4.92E-01	1.99E+10	4.13E+04
BP	1.00E+03	1.33E+05	7.96E-05	6.57E+03	7.84E+03	5.02E+00	7.87E+10	1.20E+05
US-APWR								
RC1	1.33E+03	1.33E+05	3.42E-04	6.16E+03	8.06E+03	7.90E+00	8.83E+10	1.21E+05
RC2	3.39E+02	1.06E+05	9.17E-07	5.22E+03	1.70E+04	5.79E+00	4.76E+10	9.93E+04
RC3	3.23E+03	2.59E+05	6.22E-02	2.24E+04	1.48E+05	4.61E+03	1.28E+11	1.04E+05
RC4	3.35E+02	7.88E+04	9.60E-06	4.12E+03	2.62E+03	1.27E+00	3.75E+10	7.21E+04
RC5	1.29E+02	6.54E+04	0.00E+00	2.84E+03	1.37E-01	0.00E+00	1.98E+10	5.16E+04
RC6	1.14E-02	1.69E+01	0.00E+00	7.61E-01	0.00E+00	0.00E+00	1.62E+05	3.46E-01
U.S. EPR								
RC101	3.25E-01	5.90E+02	0.00E+00	2.83E+01	0.00E+00	0.00E+00	1.10E+07	8.25E+01
RC201	5.48E+02	3.77E+04	1.10E-04	1.68E+03	2.64E+03	4.95E-03	3.48E+10	2.84E+04
RC202	1.14E+02	3.07E+04	0.00E+00	1.44E+03	6.93E-01	0.00E+00	1.83E+10	3.41E+04
RC203	2.09E+02	4.80E+04	3.08E-07	2.41E+03	1.89E+03	2.89E-03	2.60E+10	4.30E+04



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc. No. 2009-11222
ANALYSIS FOR PSEG ESPA		Rev. 2 Date
Safety Related	X	Page 102 of 105
Non-Safety Related		
Prepared by		
Reviewed by		
Approved by		
Date		
Date		
Date		

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No.	12380-001
Equip. No.	

Table 6-1 Environmental Consequence Results

Release Category	Population Dose		Number of Fatalities (Population Weighted)		Late	Number of People Exceeding Threshold Dose			Economics Cost (Dollars)	Farm Land Requiring Decontamination Area (Hectares)
	Water Ingestion (Person-Sv)	Total (Person-Sv)	Early	Total		25 (rem)	200 (rem)	Area		
RC204	1.18E+02	3.24E+04	0.00E+00	1.59E+03	2.37E+02	1.01E-05	1.89E+10	3.46E+04		
RC205	2.87E+02	5.71E+04	0.00E+00	2.94E+03	5.48E+03	9.78E-03	3.03E+10	4.72E+04		
RC206	6.54E+01	2.65E+04	0.00E+00	1.46E+03	2.14E+02	1.94E-01	1.48E+10	3.39E+04		
RC301	1.14E+02	3.07E+04	0.00E+00	1.44E+03	6.93E-01	0.00E+00	1.83E+10	3.41E+04		
RC302	2.09E+02	4.80E+04	3.08E-07	2.41E+03	1.99E+03	2.89E-03	2.60E+10	4.30E+04		
RC303	1.18E+02	3.24E+04	0.00E+00	1.59E+03	2.37E+02	1.01E-05	1.89E+10	3.46E+04		
RC304	2.87E+02	5.71E+04	0.00E+00	2.94E+03	5.48E+03	9.78E-03	3.03E+10	4.72E+04		
RC401	3.04E+01	1.44E+04	0.00E+00	6.45E+02	8.10E-02	0.00E+00	7.32E+09	1.84E+04		
RC402	9.58E+01	2.91E+04	0.00E+00	1.31E+03	2.42E+01	0.00E+00	1.60E+10	3.04E+04		
RC403	3.04E+01	1.44E+04	0.00E+00	6.45E+02	8.10E-02	0.00E+00	7.32E+09	1.84E+04		
RC404	9.58E+01	2.91E+04	0.00E+00	1.31E+03	2.42E+01	0.00E+00	1.60E+10	3.04E+04		
RC501	2.66E+00	5.57E+03	0.00E+00	2.49E+02	0.00E+00	0.00E+00	2.46E+08	5.28E+02		
RC502	2.66E+00	5.57E+03	0.00E+00	2.49E+02	0.00E+00	0.00E+00	2.46E+08	5.28E+02		
RC503	3.54E-01	6.53E+02	0.00E+00	2.93E+01	0.00E+00	0.00E+00	1.83E+07	1.49E+01		
RC504	3.54E-01	6.53E+02	0.00E+00	2.93E+01	0.00E+00	0.00E+00	1.83E+07	1.49E+01		
RC602	2.66E+00	5.57E+03	0.00E+00	2.49E+02	0.00E+00	0.00E+00	2.46E+08	5.28E+02		
RC701	4.91E+01	2.22E+04	0.00E+00	1.16E+03	5.64E+01	3.48E-03	1.20E+10	2.83E+04		
RC702	9.73E+02	1.59E+05	2.59E-03	1.41E+04	9.05E+04	2.21E+03	6.27E+10	7.04E+04		
RC802	5.24E+03	5.59E+05	1.51E-01	6.34E+04	3.04E+05	6.67E+04	1.19E+11	4.70E+04		



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
Safety Related		Date	
X	Non-Safety Related	Page	103 of 105
Prepared by		Date	
Reviewed by		Date	
Approved by		Date	
Client PSEG Nuclear Development			
Project PSEG ESPA			
Proj. No. 12380-001		Equip. No.	

Table 6-2 Environmental Consequence Results (Risk)

Release Category	Release Frequency (Reactor -Year)	Population Dose Risk			Risk of Fatalities			Risk of Exceeding Threshold Doses			Economic Risk (Dollars)/(Reactor-Year)	Risk of Farm Land Requiring Decontamination (Reactor-Year)
		Water Ingestion (Person-Sv)/(Reactor-Year)	Total (Person-Sv)/(Reactor-Year)	Early (Person)/(Reactor-Year)	Late (Person)/(Reactor-Year)	25 (rem) (Person)/(Reactor-Year)	200 (rem) (Person)/(Reactor-Year)					
ABWR (4005 MWt)												
NCL	1.34E-07	1.28E-08	2.01E-05	0.00E+00	8.98E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.32E-01	8.78E-07
Case 1	2.08E-08	1.28E-11	1.66E-06	0.00E+00	6.88E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-02	0.00E+00
Case 2	1.00E-10	2.04E-12	1.10E-08	0.00E+00	4.67E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-04	1.42E-11
Case 3	1.00E-10	1.16E-10	1.89E-07	0.00E+00	8.43E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.51E-03	2.91E-08
Case 4	1.00E-10	6.53E-10	7.04E-07	0.00E+00	3.11E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.30E-02	2.90E-07
Case 5	1.00E-10	2.45E-09	1.50E-06	0.00E+00	6.64E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.82E-01	1.11E-06
Case 6	1.00E-10	1.28E-08	3.55E-06	0.00E+00	1.58E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E+00	3.90E-06
Case 7	3.91E-10	1.44E-07	2.02E-05	0.00E+00	8.99E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+01	2.11E-05
Case 8	4.05E-10	3.14E-07	3.04E-05	7.94E-15	1.37E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E+01	2.75E-05
Case 9	1.70E-10	2.60E-07	1.60E-05	6.10E-14	7.28E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E+01	1.35E-05
Total (1 Unit)	1.56E-07	7.47E-07	9.43E-05	6.89E-14	4.23E-06	4.71E-07	1.99E-10	1.56E-10	1.99E-10	1.56E-10	5.15E+01	6.83E-05
ABWR (4300 MWt)												
NCL	1.34E-07	1.37E-08	2.16E-05	0.00E+00	9.63E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E-01	1.04E-06
Case 1	2.08E-08	1.37E-11	1.78E-06	0.00E+00	7.40E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-02	0.00E+00
Case 2	1.00E-10	2.19E-12	1.18E-08	0.00E+00	5.01E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-04	2.44E-11
Case 3	1.00E-10	1.24E-10	2.03E-07	0.00E+00	9.01E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.97E-03	3.14E-08
Case 4	1.00E-10	7.01E-10	7.32E-07	0.00E+00	3.24E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.62E-02	3.35E-07
Case 5	1.00E-10	2.63E-09	1.54E-06	0.00E+00	6.81E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.17E-01	1.18E-06
Case 6	1.00E-10	1.38E-08	3.66E-06	0.00E+00	1.63E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E+00	3.95E-06
Case 7	3.91E-10	1.55E-07	2.10E-05	0.00E+00	9.34E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E+01	2.13E-05
Case 8	4.05E-10	3.37E-07	3.14E-05	1.56E-14	1.42E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E+01	2.80E-05
Case 9	1.70E-10	2.81E-07	1.64E-05	9.98E-14	7.48E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E+01	1.37E-05
Total (1 Unit)	1.56E-07	8.04E-07	9.83E-05	1.15E-13	4.41E-06	7.39E-07	2.33E-10	1.77E-10	2.33E-10	2.33E-10	5.37E+01	6.95E-05
AP1000												
IC	2.21E-07	2.32E-08	2.32E-05	0.00E+00	1.04E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-01	2.39E-06
CFE	7.47E-09	1.58E-06	2.99E-04	1.11E-14	1.42E-05	3.55E-07	1.71E+02	8.89E-10	3.55E-07	1.71E+02	8.89E-10	3.25E-04
CFI	1.89E-10	2.68E-08	1.01E-05	0.00E+00	3.95E-07	5.37E-08	4.23E-11	4.23E-11	5.37E-08	4.23E-11	6.10E+00	1.50E-05
CFL	3.45E-13	5.97E-12	2.04E-08	0.00E+00	7.62E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-02	3.83E-08
CI	1.33E-09	2.62E-07	5.40E-05	0.00E+00	3.13E-06	1.72E-06	6.54E-10	1.72E-06	1.72E-06	6.54E-10	2.65E+01	5.49E-05
BP	1.05E-08	1.05E-05	1.40E-03	8.36E-13	6.90E-05	8.23E-05	5.27E-08	8.23E-05	8.23E-05	5.27E-08	8.26E+02	1.26E-03
Total (1 Unit)	2.40E-07	1.24E-05	1.79E-03	8.47E-13	8.47E-05	8.44E-05	5.43E-08	8.44E-05	8.44E-05	5.43E-08	1.03E+03	1.66E-03
Total (2 Units)	4.81E-07	2.48E-05	3.57E-03	1.69E-12	1.76E-04	1.69E-04	1.09E-07	1.69E-04	1.69E-04	1.09E-07	2.06E+03	3.31E-03
US-APWR												
RC1	7.5E-09	9.98E-06	9.98E-04	2.57E-12	4.62E-05	6.05E-05	5.93E-08	6.05E-05	6.05E-05	5.93E-08	6.62E+02	9.08E-04
RC2	2.1E-09	7.12E-07	2.23E-04	1.93E-15	1.10E-05	2.31E-05	1.21E-08	2.31E-05	2.31E-05	1.21E-08	1.00E+02	2.09E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc. No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
Safety Related		Date	
X	Non-Safety Related	Page	104 of 105
Prepared by			
Reviewed by			
Approved by			
Client PSEG Nuclear Development		Date	
Project PSEG ESPA		Date	
Proj. No. 12380-001		Date	
Equip. No.			

Table 6-2 Environmental Consequence Results (Risk)

Release Category	Release Frequency (Reactor -Year)	Population Dose Risk			Risk of Fatalities			Risk of Exceeding Threshold Doses			Economic Risk (Dollars)/(Reactor-Year)	Risk of Farm Land Requiring Decontamination (Hectares)/(Reactor-Year)
		Water Ingestion (Person-Sv)/(Reactor-Year)	Total (Person-Sv)/(Reactor-Year)	Early (Person)/(Reactor-Year)	Late (Person)/(Reactor-Year)	25 (rem) (Person)/(Reactor-Year)	200 (rem) (Person)/(Reactor-Year)					
RC3	2.0E-08	6.46E-05	5.18E-03	1.24E-09	4.48E-04	2.96E-03	9.22E-05	2.56E+03	2.08E-03			
RC4	1.1E-08	3.69E-06	8.67E-04	1.06E-13	4.53E-05	2.88E-05	1.40E-08	4.13E+02	7.93E-04			
RC5	6.5E-08	8.39E-06	4.25E-03	0.00E+00	1.85E-04	8.91E-09	0.00E+00	1.29E+03	3.35E-03			
RC6	1.1E-06	1.25E-08	1.86E-05	0.00E+00	8.37E-07	0.00E+00	0.00E+00	1.78E-01	3.81E-07			
Total (1 Unit)	1.21E-06	8.74E-05	1.15E-02	1.24E-09	7.36E-04	3.07E-03	9.23E-05	5.03E+03	7.34E-03			
U.S. EPR												
RC101	3.43E-07	1.11E-07	2.02E-04	0.00E+00	9.71E-06	0.00E+00	0.00E+00	3.77E+00	2.83E-05			
RC201	4.98E-10	2.73E-07	1.88E-05	5.48E-14	8.37E-07	1.31E-06	2.47E-12	1.73E+01	1.41E-05			
RC202	3.97E-14	4.53E-12	1.22E-09	0.00E+00	5.72E-11	2.75E-14	0.00E+00	7.27E-04	1.35E-09			
RC203	1.92E-12	4.01E-10	9.22E-08	5.91E-19	4.63E-09	3.82E-09	5.55E-15	4.99E-02	8.26E-08			
RC204	2.78E-11	3.28E-09	9.01E-07	0.00E+00	4.42E-08	6.59E-09	2.81E-16	5.25E-01	9.62E-07			
RC205	4.08E-10	1.17E-07	2.33E-05	0.00E+00	1.20E-06	2.24E-06	3.99E-12	1.24E+01	1.93E-05			
RC206	1.65E-08	1.08E-06	4.37E-04	0.00E+00	2.41E-05	3.53E-06	3.20E-09	2.44E+02	5.59E-04			
RC301	1.67E-12	1.90E-10	5.13E-08	0.00E+00	2.40E-09	1.16E-12	0.00E+00	3.06E-02	5.69E-08			
RC302	2.18E-11	4.56E-09	1.05E-06	6.71E-18	5.25E-08	4.34E-08	6.30E-14	5.67E-01	9.37E-07			
RC303	2.30E-09	2.71E-07	7.45E-05	0.00E+00	3.66E-06	5.45E-07	2.32E-14	4.35E+01	7.96E-05			
RC304	1.75E-08	5.02E-06	9.99E-04	0.00E+00	5.15E-05	9.59E-05	1.71E-10	5.30E+02	8.26E-04			
RC401	1.38E-11	4.20E-10	1.99E-07	0.00E+00	8.90E-09	1.12E-12	0.00E+00	1.01E-01	2.54E-07			
RC402	2.75E-10	2.63E-08	8.00E-06	0.00E+00	3.60E-07	6.66E-09	0.00E+00	4.40E+00	8.36E-06			
RC403	6.82E-10	2.07E-08	9.82E-06	0.00E+00	4.40E-07	5.52E-11	0.00E+00	4.99E+00	1.25E-05			
RC404	1.34E-08	1.28E-06	3.90E-04	0.00E+00	1.76E-05	3.24E-07	0.00E+00	2.14E+02	4.07E-04			
RC501	5.92E-13	1.57E-12	3.30E-09	0.00E+00	1.47E-10	0.00E+00	0.00E+00	1.46E-04	3.13E-10			
RC502	2.87E-10	7.63E-10	1.60E-06	0.00E+00	7.15E-08	0.00E+00	0.00E+00	7.06E-02	1.52E-07			
RC503	6.01E-10	2.13E-10	3.92E-07	0.00E+00	1.76E-08	0.00E+00	0.00E+00	1.10E-02	8.95E-09			
RC504	1.19E-07	4.21E-08	7.77E-05	0.00E+00	3.49E-06	0.00E+00	0.00E+00	2.18E+00	1.77E-06			
RC602	6.50E-10	1.73E-09	3.62E-06	0.00E+00	1.62E-07	0.00E+00	0.00E+00	1.60E-01	3.43E-07			
RC701	1.02E-08	5.01E-07	2.26E-04	0.00E+00	1.18E-05	5.75E-07	3.55E-11	1.22E+02	2.89E-04			
RC702	5.38E-09	5.23E-06	8.55E-04	1.39E-11	7.59E-05	4.87E-04	1.19E-05	3.79E+02	3.79E-04			
RC802	2.64E-10	1.38E-06	1.48E-04	3.99E-11	1.67E-05	8.03E-05	1.76E-05	3.14E+01	1.24E-05			
T total (1 Unit)	5.31E-07	1.54E-05	3.48E-03	5.39E-11	2.18E-04	6.72E-04	2.95E-05	1.57E+03	2.64E-03			



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	105	of 105

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

7 REFERENCES

- 7.1 Sandia National Laboratories Document No. SAND97-0594, NUREG/CR-6613, Vol. 1, Code Manual for MACCS2, User's Guide, May 1998.
- 7.2 Sandia National Laboratories Document No. SAND86-1562, NUREG/CR-4691, Vol. 2, MELCOR Accident Consequence Code System (MACCS), Model Description, February 1990.
- 7.3 Sandia National Laboratories Document No. SAND86-1309, NUREG/CR-4551, Vol. 2, Part 7, Evaluation of Severe Accident Risks: Quantification of Major Input Parameters, Rev. 1.
- 7.4 Bureau of Labor Statistics, CPI Inflation Calculator, Accessed Online, http://www.bls.gov/data/inflation_calculator.htm, on 10/1/2009.
- 7.5 Mitsubishi Heavy Industries, LTD., Document No. MUAP-DC021, US-APWR Applicant's Environmental Report – Standard Design Certification, Revision 0.
- 7.6 General Electric (GE) Nuclear Energy, Design Control Document/Tier 2, Section 1.1.10, Revision 0.
- 7.7 Westinghouse Electric Company, LLC, AP1000 Design Control Document, Revision 17.
- 7.8 MACTEC Calculation No. 2251-ESP-DEM-001, Demographic Analysis, Rev. A3.
- 7.9 U.S. Nuclear Regulatory Commission, NUREG-1815, Vol. 1, Environmental Impact Statement for an Early Site Permit (ESP) at the Exelon ESP Site, July 2006.
- 7.10 Sargent & Lundy, Software Verification & Validation Report for Program No. 03.7.868-3.4, Windows Interface for MACCS2, MELCOR Accident Consequence Code.
- 7.11 PSEG Nuclear, LLC, Environmental Report for Hope Creek Generating Station License Renewal Application, Unit 1, License No. NPF-57, 2009.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.1-1	of A.1-16

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

ATTACHMENT A.1
ABWR MACCS2 Vendor Data



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.1-2	of A.1-16

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date



HITACHI

GE Hitachi Nuclear Energy

Walter (Skip) Schumitsch
Senior Project Manager

3901 Castle Hayne Road
P.O. Box 780 / M.C. A60
Wilmington, NC 28402
USA

T 910.819.4878
F 910.342.4878
M 910.547.6669
Walter.Schumitsch@ge.com

GEPS-COM-2012-0003

Response required: Yes No

November 6, 2012

Mr. Mike Wiwel P.E.
Electrical/I&C Manager
PSEG - New Nuclear Development

Subject: Transmittal of ABWR SSAR section 19E.3

Dear Mike:

Yesterday GEH provided information in letter GEPS-COM-2012-0001 to support PSEG's NRC ESP RAIs. Section 19E.3 of the ABWR DCD was provided. As the provided DCD section did not contain the release probability for each event which PSEG requires, we are transmitting section 19E.3 of the ABWR SSAR revision which had been provided with SAH-2009-036 on September 11, 2009.

Section 19E.3 of the ABWR SSAR does not contain any GEH proprietary information. As the release probabilities are available in other public documents, the attached version does not include the non-public marking that the version provided in SAH-2009-036 contained.

Other than the non-public marking, the attached version is identical to the version provided with SAH-2009-036. The ABWR SSAR, including the attached section 19E.3, is identified as GEH document 23A6100 revision 9 and is located in the GEH electronic archive system.

If you have any questions, or if this information is not sufficient, please contact me or Isidro de la Fuente.

Sincerely,

Walter (Skip) Schumitsch
Senior Project Manager
Nuclear Plant Projects

Attachment: 19_E3 (1).pdf

cc: B Johnson G Ehler D Hinds P Campbell
A Beard J Leong I de la Fuente



Calcs. For ENVIRONMENTAL CONSEQUENCE				Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				Rev. 2	Date
Safety Related		X	Non-Safety Related		Page A.1-3 of A.1-16
Client	PSEG Nuclear Development			Prepared by	Date
Project	PSEG ESPA			Reviewed by	Date
Proj. No	12380-001	Equip. No.		Approved by	Date

23A6100 Rev. 1

ABWR

Standard Safety Analysis Report

19E.3 Consequence Analysis

This subsection describes the consequence evaluation. Key inputs and assumptions are described. The calculated results are compared to consequence-related goals to show that the goals are satisfied.

The CRAC-2 computer code (Reference 19E.3-1) was used to determine the consequences of potential reactor accidents. The CRAC code evaluates offsite dose and consequences for each accident category over a range of possible weather conditions and evacuation assumptions. The CRAC code models are described in Reference 19E.3-2. The rationale for site related input selection is presented in Subsection 19E.3.1. This data and data from the plant performance analysis is presented in Subsection 19E.3.2. The calculated results are compared to the goals in Subsection 19E.3.3.

19E.3.1 Site Assumptions

The evaluation of the consequences of a reactor accident are closely tied to the site parameters (e.g., weather, population, and land use). Envelope site parameters for deterministic evaluations are provided in Chapter 2. For probabilistic consequence evaluations, additional site related assumptions were required. They are described below.

19E.3.1.1 Meteorology

In the original WASH-1400 analysis (Reference 19E.3-3), a number of actual site meteorologies were used. However, the original WASH-1400 meteorology data files are not compatible with the CRAC-2 code. A set of meteorological data files suitable for use with the CRAC-2 code was obtained from Sandia National Laboratory. This data was used in the study given in Reference 19E.3-4. These files define hourly weather data for a one year period for twenty-six U.S. Sites. Five sites representing five geographical regions throughout the U.S. were chosen for this ABWR study. These regions were termed NE (northeast), NW (northwest), S (south), W (west), and SW (southwest) as is shown in Figure 3-1 of Reference 19E.3-4.

For each of these geographical regions, one meteorological data file was chosen. The basis for this choice was an evaluation for each meteorology using reactor release parameters for five accidents representing 98.6% of the risk calculated in the GESSAR II PRA (Reference 19E.3-5). This accident data set is given in Table 19E.3-1. It was chosen since the GESSAR II design is closer to the ABWR design in terms of offsite releases than other designs for which PRA's were available. In determining the variations in consequence due to different meteorological data sets, each data file was input to the CRAC-2 code with all other information being identical. From these results, the site in each geographical region most closely approximating the mean total latent fatality result for that region was chosen to represent the region. The consequence



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.1-4	of A.1-16

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

23A6100 Rev. 1

ABWR

Standard Safety Analysis Report

results reported here (Subsection 19E.3.3) represent the average of five runs, one for each meteorological region.

19E.3.1.2 Population

For the ABWR consequence evaluation, the population density tables from Reference 19E.3-4, Tables 3-2 and 3-3, were used to develop regional populations corresponding to each regional meteorology. The mean values used are given in Table 19E.3-2.

19E.3.1.3 Evacuation

Many evacuation related characteristics (local roads, population demographics, emergency services) are quite site specific. No general guidance has been given for generic evacuation evaluations by the NRC. The evacuation parameters used in this study are given in Table 19E.3-3. Five percent of the people are assumed not to evacuate. Ninety-five percent are assumed to wait 1.5 hours after notification and then move radially outward at 4.47 meters per second (10 mph). Values used for shielding were the standard CRAC assumptions. Definitions for the parameters given in Table 19E.3-3 are provided in Table 19E.3-4.

These evacuation assumptions were used for individual and societal risk calculations. For the purposes of evaluating dose levels for comparison to the dose goal (Subsection 19E.3.3.1 item 3), no evacuation or shielding was assumed.

19E.3.2 CRAC Input Data

19E.3.2.1 Input Which Differs From Standard CRAC Assumptions

The following table describes these inputs.

Table	Inputs
19E.3-2	Population Density
19E.3-3	Evacuation Parameters
19E.3-5	Site and Reactor Data for Meteorological Modeling
19E.3-6	Event Release Parameters

19E.3.2.2 Input to CRAC from Performance Analysis

The plant performance analysis results which are input parameters to the CRAC-2 code are described here and are shown in Table 19E.3-6. These inputs describe the data used which are plant specific and are not related to radiological modeling which is discussed in Subsection 19E.3.1. The plant input parameters are described below with the



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.1-5	of A.1-16

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

Prepared by	Date
Reviewed by	Date
Approved by	Date

23A6100 Rev. 4

ABWR

Standard Safety Analysis Report

subsection of the SSAR in which the parameters are developed indicated at the end of each section in parenthesis.

For each accident case, which represents the accident sequence listed below it, the following data are used (Table 19E.3-6):

Release Category Name, LNAME(j) - Abbreviated name given to release which results from the event. (Subsection 19E.2)

Release Probability, P(j) - the probability per year associated with release LNAME(j). (Subsection 19D.4)

TL(j) - time(hr) from reactor shutdown (defined as the end of neutron generation) to release to the atmosphere. The value is used to determine isotopic decay prior to release from the plant. For an ATWS event, containment failure is postulated to occur before core damage. Since neutron production may continue up to the time of core melt, TL may be zero for an ATWS event. (Subsection 19E.2)

DR(j) - duration of initial release (h) of radionuclides from the plant. This value is used to determine the expansion of the cloud. The maximum value of this parameter is 10 hours (CRAC limitation for plume modeling). (Subsection 19E.2)

TLL(j) - warning time (h) between official notification of public and release of radioactivity from the plant. The basis for the warning time is the onset of severe core damage. The emergency action levels specified in Reference 19E.3-6, Appendix I require that a site area emergency be delayed when "delayed core with possible loss of coolable geometry" occurs.

FPR(j) - Sensible heat release rate in calories/s in the release cloud. This value is used to determine the initial buoyancy of the released cloud plume.

RH(j) - Plume release height in meters from the ground. If this value is less than the building height, a ground release with building wake effect is assumed. Otherwise, the plume will be buoyed to a height equal to the release height plus a buoyancy height. (Subsection 19D.5)

FLEAK(j,k) - fraction of core inventory at the beginning of the accident for each isotope group which is eventually released into the atmosphere. The standard isotopes groups are:

- (1) Noble gases (Kr, Xe)
- (2) Not used, originally used for organic iodide
- (3) Iodine, including organic iodide



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related	Rev. 2	Date
			Page A.1-6	of A.1-16
Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

23A6100 Rev. 3

ABWR

Standard Safety Analysis Report

- (4) Cesium, including Rb
- (5) Tellurium, including Sb
- (6) Barium, including Sr
- (7) Cobalt, including Mo, Tc, Ru, Rh
- (8) Lanthanum, including Y, Zr, Nb, Ce, Pr, Nd, Np, Pu, Am, Cm

19E.3.3 Comparison of Results to Goals

19E.3.3.1 Goals

Three major consequence-related goals were established in the GE ABWR Licensing Review Bases (Reference 19E.3-7) which referenced the Safety Goal Policy Statement. These goals are:

(1) Individual Risk Goal

The risk to an average individual in the "vicinity" of a nuclear power plant of prompt fatalities that might result from reactor accidents should not exceed one-tenth of one percent (0.1%) of the sum of "prompt fatality risks" resulting from other accidents to which members of the U.S. Population are generally exposed. As noted in the Safety Goals Policy statement, "vicinity" is defined as the area within 1.61 km (1 mile) of the plant site boundary. "Prompt Fatality Risks" are defined as those risks to which the average individual residing in the vicinity of the plant is exposed to as a result of normal daily activities. Such risks are the sum of risks which result in fatalities from such activities as driving, household chores, occupational activities, etc. For this evaluation, the sum of prompt fatality risks was taken as the U.S. accidental death risk value of 39.1 deaths per 100,000 people per year based upon Reference 19E.3-8.

(2) Societal Risk Goal

The risk to the population in the area "near" a nuclear power plant of cancer fatalities that might result from nuclear power plant operation should not exceed one-tenth of one percent (0.1%) of the sum of the "cancer fatality risks" resulting from all other causes. As noted in the Safety Goal Policy Statement, "near" is defined as within 16.1 km (10 miles) of the plant. The "cancer fatality risk" was taken as 169 deaths per 100,000 people per year based upon 1983 statistics in Reference 19E.3-9.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	

Calc No.	2009-11222		
Rev.	2	Date	
Page	A.1-7	of A.1-16	

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

Prepared by		Date	
Reviewed by		Date	
Approved by		Date	

23A6100 Rev. 5

ABWR

Standard Safety Analysis Report

(3) Radiation Dose Goal

The probability of exceeding a whole body dose of 0.25 Sv at a distance of 805 m (one-half mile) from the reactor shall be less than one in a million per reactor year.

The calculated results are compared to these goals in the following subsections.

19E.3.3.2 Results

The results from the internal events analysis and the seismic event analysis (the average of the individual results over all five meteorological regions evaluated) are shown in Table 19E.3-7. A plot of whole body dose at a distance of 805 m (one-half mile) against cumulative probability is shown in Figure 19E.3-1. Based upon these results, the ABWR meets the established consequence related goals.

19E.3.4 References

19E.3-1 Ritchie, L.T., et al. *Calculation of Reactor Accident Consequences Version 2 CRAC2: Computer Code*, NUREG/CR-2326, February 1983.

19E.3-2 Ritchie, L.T., et al. *CRAC2 Model Description*, NUREG/CR-2552, March 1984.

19E.3-3 *Reactor Safety Study, Appendix 6: Calculation of Reactor Accident Consequences*, WASH-1400 (NUREG 75/014), October 1975.

19E.3-4 Aldrich, D.C., et al. *Technical Guidance for Siting Criteria Development*, NUREG/CR-2239, December 1982.

19E.3-5 *General Electric Company GESSAR II BWR/6 Nuclear Island Design (22A7007)*, March 1982.

19E.3-6 *Criteria for preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants*, NUREG-0654.

19E.3-7 Murley, T.E., *Advanced Boiling Water Reactor Licensing Review Basis*, Project No. 671, August 7, 1987.

19E.3-8 *Accident Facts*, 1988, National Safety Council.

19E.3-9 *1986 Cancer Facts & Figures*, American Cancer Society, 90 Park Ave, New York, NY 10016.

Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc. No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	A.1-8 of A.1-16
Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	<input type="checkbox"/>

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

ABWR

23A6100 Rev. 1

Standard Safety Analysis Report

Table 19E.3-1 GESSAR Reactor Release Parameters

Category Group =	P ₀	TL ₀	DR ₀	TLL ₀	FPR ₀	RH ₀	Isotopic Release Fractions by Group							
							1	3	4	5	6	7	8	
C1-TR-E2	2.09E-07	1.66	0.1	0.7	4.0E+07	10.0	1.0E+0	1.3E-03	1.0E-03	1.0E-03	1.1E-03	2.6E-04	1.5E-07	
C1-TR-E3	1.316E-06	1.7	4.3	0.7	1.5E+06	10.0	1.0E+0	1.3E-03	1.0E-03	1.0E-03	2.2E-04	3.1E-04	4.9E-05	
C1-TR-L3	6.92E-07	11.9	10.0	10.9	5.0E+05	49.0	1.0E+0	4.8E-04	1.8E-04	1.8E-04	3.9E-05	5.7E-05	9.0E-06	
C1-TR-12	7.59E-07	3.0	0.1	2.0	4.4E+07	10.0	1.0E+0	1.3E-03	9.9E-04	9.9E-04	1.0E-03	2.5E-04	1.5E-07	
C1-TR-13	1.66E-06	3.0	3.6	2.0	2.1E+06	10.0	1.0E+0	1.3E-03	1.0E-03	1.0E-03	2.2E-04	3.1E-04	4.8E-05	

Note:

See Subsection 19E.3.2.2 for definition of parameters in this table.

19E.3-6

Consequence Analysis — Amendment 31



Calcs. For ENVIRONMENTAL CONSEQUENCE				Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA					
Safety Related		X	Non-Safety Related		
Rev. 2			Date		
Page A.1-9			of A.1-16		

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

23A6100 Rev. 4

ABWR

Standard Safety Analysis Report

Table 19E.3-2 Population Density for Each Geographical Region

Radial Interval (mi)	Mean Population by Geographic Sector (people per sq. mi.)				
	NE	MW	S	W	SW
0-5	100	60	30	20	10
5-10	130	60	80	30	20
10-20	170	90	70	60	30
20-30	180	120	100	50	40
30-50	400	100	80	40	130

Note:
Data taken from Reference 19E.3-4, Table 3-2.

Table 19E.3-3 Evacuation Parameters

Parameter	Strategy	
	1	2
Fraction of Population Evacuating	0.95	0.05
Time Delay Before Evacuation — h	1.5	0
Evacuation Speed — m/s (mph)	4.47 (10)	0
Maximum Distance of Evacuation — m (mi)	4827 (3)	0
Distance Moved by Evacuees — m (mi)	1260 (7)	0
Sheltering Radius — m (mi)	24140 (15)	0

Note:
See Subsection 19E.3.1.3 for additional description of parameters in this table.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.1-10 of A.1-16	

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

23A6100 Rev. 3

ABWR

Standard Safety Analysis Report

Table 19E.3-4 Evacuation Parameter Definition

Parameter	Definition
Fraction of Population Evacuating	Fraction of population following the evacuation strategy.
Time Delay Before Evacuating	Time between notice to evacuate and start of evacuation.
Evacuation Speed	Once evacuation begins, it is assumed that the public moves directly outward and away from the plant site at this speed.
Maximum Distance of Evacuation	Once evacuation begins, individuals within this distance are assumed to evacuate as above with their exposure determined by detailed tracking of their position relative to the radioactive cloud plume. People living beyond this distance are assumed to not be evacuated initially. They are assumed to be exposed to ground contamination for 24 hours and then evacuated.
Distance moved by Evacuees before Sheltering	Distance at which evacuees are assumed to take shelter. This parameter is nominally designed to represent the use of prearranged evacuation shelters.
Sheltering Radius	People living within this distance are assumed to take shelter if they do not evacuate. Sheltering is assumed for 24 hours at which time these people are assumed to be relocated out of the contaminated area, without further exposure.

Table 19E.3-5 Site and Reactor Data for Meteorological Modeling

Reactor Building Length	54.0 m	177 ft.
Reactor Building Height	37.7 m	124 ft.
Interval for Special Wake Effects	2.41 km	1.5 mi.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	

Calc No.	2009-11222		
Rev.	2	Date	
Page	A.1-11	of A.1-16	

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

Prepared by		Date	
Reviewed by		Date	
Approved by		Date	

23A6100 Rev. 1

ABWR

Standard Safety Analysis Report

Table 19E.3-6 Event Release Parameters

Accident	P(i)	TL	DR	TLL	FPR	RH	Release Fractions*		
							NG	Iodine	Cesium
NCL	1.34E-7	2.7	10	1.7	3.3E+5	37	0.044	2.3E-05	2.3E-05
CASE 1	2.08E-8	20	1	19.2	3.3E+5	37	1	1.5E-07	1.3E-05
LCHPFSRN									
LCHPPSRN									
LBLCFSRN									
SBRCPFRN									
LCLPPFRN									
LCPFSRN									
CASE 2	<10 ⁻¹⁰	19	1	18.2	3.3E+5	37	1	5.0E-06	5.0E-06
LCLPPFCR									
LCLPFSCR									
CASE 3	<10 ⁻¹⁰	50	10	49.2	3.3E+5	37	1	2.8E-04	2.2E-03
LCHPFS90									
CASE 4	<10 ⁻¹⁰	20	1	19.2	3.3E+5	37	1	1.6E-03	1.6E-03
DF100FSR									
DF100PFR									
CASE 5	<10 ⁻¹⁰	19	1	19.2	3.3E+5	37	1	6.0E-03	5.3E-04
LBLCPFRN									
CASE 6	<10 ⁻¹⁰	19	10	18.2	3.3E+5	37	1	3.1E-02	7.7E-02
LCHPPSD90									
LBLCPFD90									
LBLCFSD90									
CASE 7	3.91E-10	20	10	19.2	3.3E+5	37	1	8.9E-02	9.9E-02
LCLPFSD90									
LCHPPFPM									
LCLPPFD90									
CASE 8	4.05E-10	2	10	1.2	1.0E+6	37	1	1.9E-01	2.5E-01
LCHPPFEH									
LCHPPFBR									
LCHPPFBD									
CASE 9	1.7E-10	23.6	10	12.2	3.3E+5	37	1	3.7E-01	3.6E-01
SBRCPFD90									

* Group 5-8 negligible release

Note:

See Subsection 19E.3.2.2 for definition of parameters in this table.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.1-12 of A.1-16	

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

23A6100 Rev. 4

ABWR

Standard Safety Analysis Report

Table 19E.3-7 Consequence Goals and Results

Goal	Numerical Goal	ABWR
Individual Risk	<3.9x10 ⁻⁷ (0.1%)	2.2X10 ⁻¹³
Societal Risk	<1.7x10 ⁻⁶ (0.1%)	1.3X10 ⁻¹²
Radiation Dose Probability at 0.25 Sv	<10 ⁻⁶	<10 ⁻⁹

Table 19E.3-8 Deleted



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.1-13 of A.1-16	

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

23A6100 Rev. 4

ABWR

Standard Safety Analysis Report

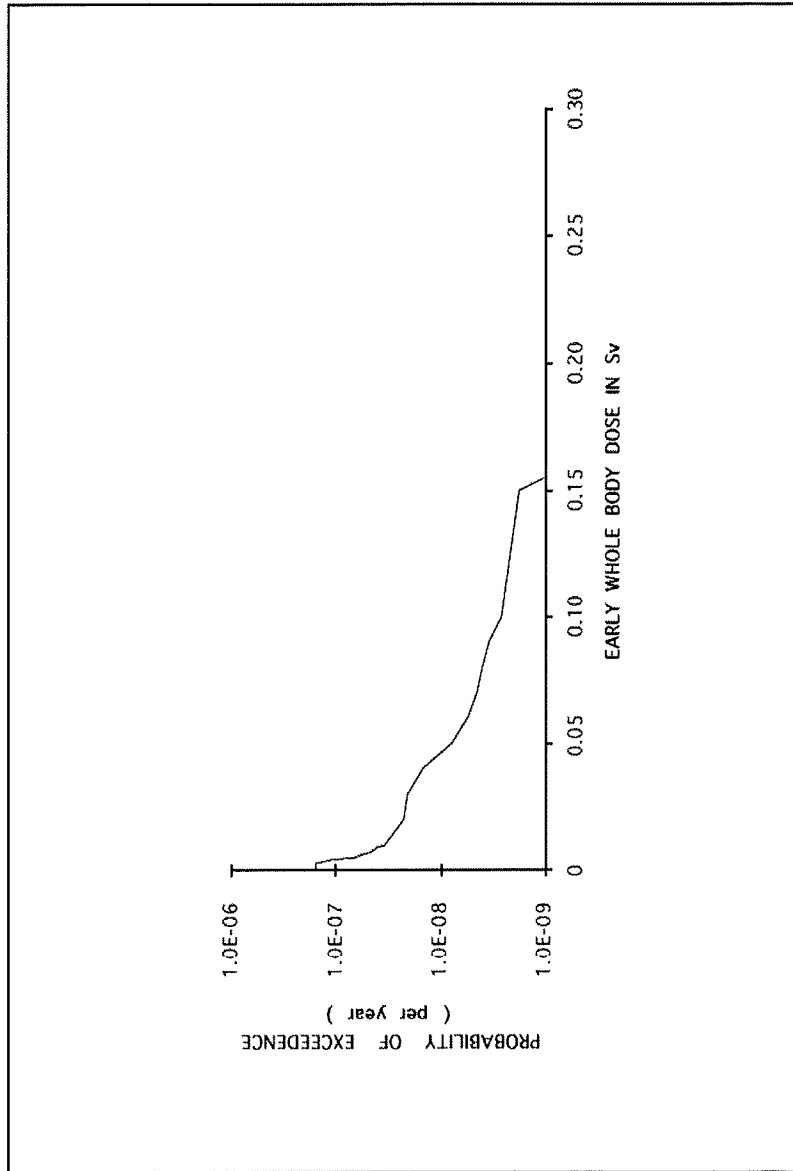


Figure 19E.3-1 Whole Body Dose at 805 m (0.5 Mile) as Probability of Exceedence



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.1-14 of A.1-16	

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

23A6100 Rev. 1

ABWR

Standard Safety Analysis Report

Figure 19E.3-2 Deleted



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.1-15 of A.1-16	

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

MACCS Inventory.txt

* core inventory at end of cycle (Bq/Mwt)

	NUCNAM	CORINV (Bq/Mwt)
RDCORINV001	CO-58	3.515E+12
RDCORINV002	CO-60	2.118E+10
RDCORINV003	KR-85	1.116E+13
RDCORINV004	KR-85M	2.492E+14
RDCORINV005	KR-87	4.779E+14
RDCORINV006	KR-88	6.771E+14
RDCORINV007	RB-86	1.737E+12
RDCORINV008	SR-89	9.142E+14
RDCORINV009	SR-90	9.555E+13
RDCORINV010	SR-91	1.170E+15
RDCORINV011	SR-92	1.247E+15
RDCORINV012	Y-90	1.031E+14
RDCORINV013	Y-91	1.191E+15
RDCORINV014	Y-92	1.253E+15
RDCORINV015	Y-93	1.448E+15
RDCORINV016	ZR-95	1.635E+15
RDCORINV017	ZR-97	1.679E+15
RDCORINV018	NB-95	1.634E+15
RDCORINV019	MO-99	1.853E+15
RDCORINV020	TC-99M	1.599E+15
RDCORINV021	RU-103	1.569E+15
RDCORINV022	RU-105	1.106E+15
RDCORINV023	RU-106	5.569E+14
RDCORINV024	RH-105	9.337E+14
RDCORINV025	SB-127	8.452E+13
RDCORINV026	SB-129	2.989E+14
RDCORINV027	TE-127	8.343E+13
RDCORINV028	TE-127M	1.262E+13
RDCORINV029	TE-129	2.812E+14
RDCORINV030	TE-129M	7.625E+13
RDCORINV031	TE-131M	1.379E+14
RDCORINV032	TE-132	1.403E+15
RDCORINV033	I-131	9.733E+14
RDCORINV034	I-132	1.423E+15
RDCORINV035	I-133	2.036E+15
RDCORINV036	I-134	2.241E+15
RDCORINV037	I-135	1.922E+15
RDCORINV038	XE-133	2.045E+15
RDCORINV039	XE-135	2.645E+14
RDCORINV040	CS-134	1.982E+14
RDCORINV041	CS-136	4.364E+13
RDCORINV042	CS-137	1.230E+14
RDCORINV043	BA-139	1.825E+15
RDCORINV044	BA-140	1.756E+15
RDCORINV045	LA-140	1.860E+15
RDCORINV046	LA-141	1.641E+15
RDCORINV047	LA-142	1.606E+15
RDCORINV048	CE-141	1.628E+15
RDCORINV049	CE-143	1.536E+15
RDCORINV050	CE-144	1.307E+15
RDCORINV051	PR-143	1.519E+15
RDCORINV052	ND-147	6.694E+14
RDCORINV053	NP-239	2.263E+16
RDCORINV054	PU-238	5.866E+12
RDCORINV055	PU-239	5.055E+11
RDCORINV056	PU-240	8.318E+11
RDCORINV057	PU-241	1.999E+14
RDCORINV058	AM-241	1.627E+11
RDCORINV059	CM-242	1.187E+14



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.1-16	of A.1-16

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

RDCORINV060 CM-244 MACCS Inventory.txt
 2.719E+12



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222
Rev. 2	Date
Page	A.2-1 of A.2-12

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT A.2
 AP1000 MACCS2 ATMOS File Data



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev. 2	Date	
Page	A.2-2	of A.2-12

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

From: "Moorer, Tom C." <TCMOORER@southernco.com>
 To: "Mark Notich" <mdn@nrc.gov>,"Michael R Sackschewsky" <michael.sackschewsky@pnl.gov>
 Date: 7/18/2007 11:35:20 AM
 Subject: MACCS2 Input and Output File Revisions

<<VOUT.TXT>> <<VMET.INP>> <<VSITE.INP>> <<VCHRONC.INP>>
 <<VEARLY.INP>>
 <<VATMOS.INP>>

Mark:

The attached files represent the current input and output information for the MACCS2 run. They include the changes made in support of our recent teleconference with Van Ramsdell and Al Toblin. We will also be revising Chapter 7 of the ER to include this information in the next revision (Rev. 3) this Fall.

This information will be formally submitted for the docket in the next few days. This advance copy is provided to expedite your review. I hope that this resolves all of Van's questions regarding Chapter 7 issues.

TCM

Thomas C. Moorer
 Southern Nuclear Development
 Project Manager - Environmental
 (205) 992-5807 (office)
 (205) 902-7847 (cell)
 (205) 438-1886 (LINC)
 (205) 992-6108 (FAX)



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related	Rev. 2	Date
			Page A.2-3 of A.2-12	
Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Hearing Identifier: Vogtle_Public
 Email Number: 451

Mail Envelope Properties (46B1A2DA.HQGWDO01.TWGWPO04.200.2000014.1.D4FF7.1)

Subject: MACCS2 Input and Output File Revisions
 Creation Date: 7/18/2007 11:35:20 AM
 From: "Moorer, Tom C." <TCMOORER@southernco.com>

Created By: TCMOORER@southernco.com

Recipients
 "Mark Notich" <mdn@nrc.gov>
 "Michael R Sackschewsky" <michael.sackschewsky@pnl.gov>

Post Office TWGWPO04.HQGWDO01
 Route nrc.gov

Files	Size	Date & Time
MESSAGE	828	7/18/2007 11:35:20 AM
VOUT.TXT	457043	8/2/2007 9:24:42 AM
VMET.INP	166621	8/2/2007 9:24:42 AM
VSITE.INP	10454	8/2/2007 9:24:42 AM
VCHRONC.INP	13308	8/2/2007 9:24:42 AM
VEARLY.INP	13611	8/2/2007 9:24:42 AM
VATMOS.INP	20308	8/2/2007 9:24:42 AM
Mime.822	956482	8/2/2007 9:24:42 AM

Options
 Priority: Standard
 Reply Requested: No
 Return Notification: None

Concealed Subject: No
 Security: Standard



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222
Rev. 2	Date
Page	A.2-4 of A.2-12

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

Prepared by	Date
Reviewed by	Date
Approved by	Date

```

*****
* FILE NAME:  VATMOS.INP
*
* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT
*
RIATNAM1001 'ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS - AP1000'
*
*****
* GEOMETRY DATA BLOCK, LOADED BY INPGE0, STORED IN /GEOM/
*
* NUMBER OF RADIAL SPATIAL ELEMENTS
*
GENUMRAD001 10
*
* SPATIAL ENDPOINT DISTANCES IN MILES  (SEE SIT FILE)
*
*      END001  1    2    3    4    5
*      END002 10   20   30   40   50
*
* SPATIAL ENDPOINT DISTANCES IN KILOMETERS
*
GESEPAEND001  1.6093  3.2187  4.8280  6.4374  8.0467
GESEPAEND002 16.0935 32.1869 48.2804 64.3739 80.4674
*****
* NUCLIDE DATA BLOCK, LOADED BY INPISO, STORED IN /ISOGRP/, /ISONAM/
*
* Number of pseudo-stable nuclides (used to truncate the decay chains)
*
ISNUMSTB001      27
*
* List of pseudo-stable nuclides
*
ISNAMSTB001  I-129  (daughter of Te-129 and Te-129m)
ISNAMSTB002  Xe-131m (daughter of I-131)
ISNAMSTB003  Xe-133m (daughter of I-133)
ISNAMSTB004  Xe-135m (daughter of I-135)
ISNAMSTB005  Cs-135  (daughter of Xe-135 and Xe-135m)
ISNAMSTB006  Sm-147  (daughter of Fm-147)
ISNAMSTB007  U-234  (daughter of Pu-238)
ISNAMSTB008  U-235  (daughter of Pu-239)
ISNAMSTB009  U-236  (daughter of Pu-240)
ISNAMSTB010  U-237  (daughter of Pu-241)
ISNAMSTB011  Np-237  (daughter of Am-241)
ISNAMSTB012  Rb-87  (daughter of Kr-87)
ISNAMSTB013  Ba-137m (daughter of Cs-137)
ISNAMSTB014  Rb-88  (daughter of Kr-88)
ISNAMSTB015  Y-91m  (daughter of Sr-91)
ISNAMSTB016  Zr-93  (daughter of Y-93)
ISNAMSTB017  Nb-93m (daughter of Zr-93)
ISNAMSTB018  Nb-95m (daughter of Zr-95)
ISNAMSTB019  Nb-97  (daughter of Zr-97 and Nb-97m)
ISNAMSTB020  Nb-97m (daughter of Zr-97)
ISNAMSTB021  Tc-99  (daughter of Mo-99)
ISNAMSTB022  Rh-103m (daughter of Ru-103)
ISNAMSTB023  Rh-106  (daughter of Ru-106)
ISNAMSTB024  Te-131  (daughter of Te-131m)
ISNAMSTB025  Pr-144  (daughter of Ce-144 and Pr-144m)
ISNAMSTB026  Pr-144m (daughter of Ce-144)
ISNAMSTB027  Fm-147  (daughter of Nd-147)
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222
Rev. 2	Date
Page	A.2-5 of A.2-12

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

Prepared by	Date
Reviewed by	Date
Approved by	Date

Page 2 of 9

```

* Number of radioactive nuclides to be considered
*
ISNUMISO001 60
*
* NUMBER OF NUCLIDE GROUPS
*
ISMAXGRP001 9
*
* WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP
*
*           WETDEF      DRYDEF
*
ISDEFFLA001 .FALSE.   .FALSE.
ISDEFFLA002 .TRUE.    .TRUE.
ISDEFFLA003 .TRUE.    .TRUE.
ISDEFFLA004 .TRUE.    .TRUE.
ISDEFFLA005 .TRUE.    .TRUE.
ISDEFFLA006 .TRUE.    .TRUE.
ISDEFFLA007 .TRUE.    .TRUE.
ISDEFFLA008 .TRUE.    .TRUE.
ISDEFFLA009 .TRUE.    .TRUE.
*
* NUCLIDE GROUP DATA FOR 9 NUCLIDE GROUPS
* (SAME AS 1150 EXCEPT LOWER CASE NUCNAM, NO PARENT OR HALFLIFE (1:page 5-7)
*
*           NUCNAM      IGROUP
*
ISOTEGRF001 Co-58      6
ISOTEGRF002 Co-60      6
ISOTEGRF003 Kr-85      1
ISOTEGRF004 Kr-85m     1
ISOTEGRF005 Kr-87      1
ISOTEGRF006 Kr-88      1
ISOTEGRF007 Rb-86      3
ISOTEGRF008 Sr-89      5
ISOTEGRF009 Sr-90      5
ISOTEGRF010 Sr-91      5
ISOTEGRF011 Sr-92      5
ISOTEGRF012 Y-90      7
ISOTEGRF013 Y-91      7
ISOTEGRF014 Y-92      7
ISOTEGRF015 Y-93      7
ISOTEGRF016 Zr-95      7
ISOTEGRF017 Zr-97      7
ISOTEGRF018 Nb-95      7
ISOTEGRF019 Mo-99      6
ISOTEGRF020 Tc-99m     6
ISOTEGRF021 Ru-103     6
ISOTEGRF022 Ru-105     6
ISOTEGRF023 Ru-106     6
ISOTEGRF024 Rh-105     6
ISOTEGRF025 Sb-127     4
ISOTEGRF026 Sb-129     4
ISOTEGRF027 Te-127     4
ISOTEGRF028 Te-127m    4
ISOTEGRF029 Te-129     4
ISOTEGRF030 Te-129m    4
ISOTEGRF031 Te-131m    4
ISOTEGRF032 Te-132     4
ISOTEGRF033 I-131      2
ISOTEGRF034 I-132      2

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.2-6	of A.2-12

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

```

ISCTPGRP035  I-133      2
ISCTPGRP036  I-134      2
ISCTPGRP037  I-135      2
ISCTPGRP038  Xe-133      1
ISCTPGRP039  Xe-135      1
ISCTPGRP040  Cs-134      3
ISCTPGRP041  Cs-136      3
ISCTPGRP042  Cs-137      3
ISCTPGRP043  Ba-139      9
ISCTPGRP044  Ba-140      9
ISCTPGRP045  La-140      7
ISCTPGRP046  La-141      7
ISCTPGRP047  La-142      7
ISCTPGRP048  Ce-141      8
ISCTPGRP049  Ce-143      8
ISCTPGRP050  Ce-144      8
ISCTPGRP051  Pr-143      7
ISCTPGRP052  Nd-147      7
ISCTPGRP053  Np-239      8
ISCTPGRP054  Pu-238      8
ISCTPGRP055  Pu-239      8
ISCTPGRP056  Pu-240      8
ISCTPGRP057  Pu-241      8
ISCTPGRP058  Am-241      7
ISCTPGRP059  Cm-242      7
ISCTPGRP060  Cm-244      7
.....
* WET DEPOSITION DATA BLOCK, LOADED BY INFWET, STORED IN /WETCON/
*
* WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR
*
WDCWASH1001  9.5E-5  (JON HELTON AFTER JONES, 1986)
*
* WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR
*
WDCWASH2001  0.8    (JON HELTON AFTER JONES, 1986)
.....
* DRY DEPOSITION DATA BLOCK, LOADED BY INFDRY, STORED IN /DRYCON/
*
* NUMBER OF PARTICLE SIZE GROUPS
*
DENPSCRPO01  3
*
* DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
*
DEVDEPOS001  0.0    0.01   0.001  (values from URD)
* First value is for volatile iodine (5% of total; see PSDIST002)
* Second value is for particulate iodine (95% ; see PSDIST002)
* Third value is for all other particulates except iodine (see PSDIST 3-9)
.....
* DISPERSION PARAMETER DATA BLOCK, LOADED BY INFDIS, STORED IN /DISPY/, /DISPZ/
*
* # of distances in plume-size tables--which can be used as an alternative to the power-law mode
* (to utilize the power-law model, set NUM_DIST to zero or delete the following data card)
*
NUM_DIST001  0
*
* SIGMA = A * X ** B
*
* Taken from URD

```



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	

Calc No.	2009-11222		
Rev.	2	Date	
Page	A.2-7	of A.2-12	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Page 4 of 9

```

* P-G CLASS:
          A           E           C           D           E           F
DFCYSIGA001  0.3658    0.2751    0.2089    0.1474    0.1046    0.0722
DFCYSIGB001  0.9031    0.9031    0.9031    0.9031    0.9031    0.9031
DFCZSIGA001  2.47E-4    0.078    0.144    0.368    0.2517    0.184
DFCZSIGB001  2.118      1.055    0.911    0.8764   0.6720    0.6546
*
* LINEAR SCALING FACTOR FOR SIGMA-Y FUNCTION, NORMALLY 1
*
DFYSCALE001  1.
*
* LINEAR SCALING FACTOR FOR SIGMA-Z FUNCTION,
* NORMALLY USED FOR SURFACE ROUGHNESS LENGTH CORRECTION.
* (Z1 / Z0) ** 0.2, FROM CRACKS WE HAVE (10 CM / 3 CM) ** 0.2 = 1.27
*
DFZSCALE001  1.27
*.....*
* EXPANSION FACTOR DATA BLOCK, LOADED BY INEXP, STORED IN /EXPAND/
*
* TIME BASE FOR EXPANSION FACTOR (SECONDS)
*
FMTIMEA001  180. (from Westinghouse ATMOS file)
*
* BREAK POINT FOR FORMULA CHANGE (SECONDS)
*
FMERKENT001  3600. (1 HOUR)
*
* EXPONENTIAL EXPANSION FACTOR NUMBER 1
*
FMXPFAC1001  0.2
*
* EXPONENTIAL EXPANSION FACTOR NUMBER 2
*
FMXPFAC2001  0.25
*.....*
* PLUME RISE DATA BLOCK, LOADED BY INPLRS, STORED IN /PLUMRS/
*
* SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A BOUYANT PLUME
* (USED BY FUNCTION CAUGHT)
*
PRSCLEPW001  1.
*
* SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
* (USED BY FUNCTION PLMRIS)
*
PRSCLEDP001  1.
*
* SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
* (USED BY FUNCTION PLMRIS)
*
PRSCLEFP001  1.
*.....*
* RELEASE DATA BLOCK, LOADED BY INPREL, STORED IN /ATNAM2/, /MULREL/
*.....* RELEASE DATA BLOCK *.....*
*
* Vogtle ESP CONTAINMENT VESSEL (DCD REV16 P.3.8-1)
* height 215'4" (65.63 meters) X width 130' (39.62 meters)
*
* Initial value of sigma-y for each plume
*
SEGYNIT001  9.21  9.21  9.21  9.21  *(initial sigma-y = W/4.3)

```




Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related		X	Non-Safety Related	
Client PSEG Nuclear Development			Prepared by	
Project PSEG ESPA			Reviewed by	
Proj. No 12380-001 Equip. No.			Approved by	
			Date	
			Date	
			Date	

```

* Initial value of sigma-s for each plume
*
SIGZINIT001  30.53  30.53  30.53  30.53  *(initial sigma-s = H/2.15)
*
* Building height (meters)
*
WEBUILDH001  65.63  65.63  65.63  65.63  *(Height of Vogtle ESP containment)
*
* PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP
* YOU MUST SPECIFY A COLUMN OF DATA FOR EACH OF THE PARTICLE SIZE GROUPS
*
RDFSDIST001      0.0    0.0    1.0
RDFSDIST002      0.05   0.95   0.0
RDFSDIST003      0.0    0.0    1.0
RDFSDIST004      0.0    0.0    1.0
RDFSDIST005      0.0    0.0    1.0
RDFSDIST006      0.0    0.0    1.0
RDFSDIST007      0.0    0.0    1.0
RDFSDIST008      0.0    0.0    1.0
RDFSDIST009      0.0    0.0    1.0
*
* AP1000 CORE INVENTORY, END-OF-CYCLE from AP1000 DCD, Rev 12 (in Rev 14)
*
*
*          NUCNAM      CORINV (Bq)
*
RDCORINV001      Co-58      0.0
RDCORINV002      Co-60      0.0
RDCORINV003      Kr-85      3.92E+16
RDCORINV004      Kr-85m     9.73E+17
RDCORINV005      Kr-87      1.58E+18
RDCORINV006      Kr-88      2.64E+18
RDCORINV007      Rb-86      8.47E+18
RDCORINV008      Sr-89      3.57E+18
RDCORINV009      Sr-90      3.07E+17
RDCORINV010      Sr-91      4.44E+18
RDCORINV011      Sr-92      4.77E+18
RDCORINV012      Y-90       3.20E+17
RDCORINV013      Y-91       4.59E+18
RDCORINV014      Y-92       4.61E+18
RDCORINV015      Y-93       5.51E+18
RDCORINV016      Zr-95      6.14E+18
RDCORINV017      Zr-97      6.07E+18
RDCORINV018      Nb-95      6.18E+18
RDCORINV019      Mo-99      6.81E+18
RDCORINV020      Tc-99m     5.96E+18
RDCORINV021      Ru-103     5.37E+18
RDCORINV022      Ru-105     3.64E+18
RDCORINV023      Ru-106     1.76E+18
RDCORINV024      Rh-105     3.33E+18
RDCORINV025      Sb-127     3.81E+17
RDCORINV026      Sb-129     1.18E+18
RDCORINV027      Te-127     3.77E+17
RDCORINV028      Te-127m    4.88E+16
RDCORINV029      Te-129     1.12E+18
RDCORINV030      Te-129m    1.67E+17
RDCORINV031      Te-131m    5.18E+17
RDCORINV032      Te-132     5.11E+18
RDCORINV033      I-131      3.56E+18

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.2-9	of A.2-12

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Page 6 of 9

```

RDCORIN034 I-132 5.18E+18
RDCORIN035 I-133 7.86E+18
RDCORIN036 I-134 8.07E+18
RDCORIN037 I-135 6.58E+18
RDCORIN038 Xe-133 7.08E+18
RDCORIN039 Xe-135 1.79E+18
RDCORIN040 Cs-134 7.18E+17
RDCORIN041 Cs-136 2.08E+17
RDCORIN042 Cs-137 4.18E+17
RDCORIN043 Ba-139 6.59E+18
RDCORIN044 Ba-140 6.38E+18
RDCORIN045 La-140 6.78E+18
RDCORIN046 La-141 5.99E+18
RDCORIN047 La-142 5.81E+18
RDCORIN048 Ce-141 6.08E+18
RDCORIN049 Ce-143 5.62E+18
RDCORIN050 Ce-144 4.55E+18
RDCORIN051 Pr-143 5.40E+18
RDCORIN052 Nd-147 2.40E+18
RDCORIN053 Np-239 7.14E+19
RDCORIN054 Pu-238 1.42E+16
RDCORIN055 Pu-239 1.25E+18
RDCORIN056 Pu-240 1.53E+18
RDCORIN057 Pu-241 4.11E+17
RDCORIN058 Am-241 4.68E+14
RDCORIN059 Cm-242 1.09E+17
RDCORIN060 Cm-244 1.84E+16

```

```

*
RDCORSCA001 1.000
*
RDAPLPRC001 PARENT (apply rel frac the same as prior versions)
*
* *****
* OUTPUT CONTROL DATA BLOCK, LOADED BY INPOST, STORED IN /STOPME/, /ATMOST/
*
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
*
OCENDAT1001 .FALSE. (SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC)
*
OCIDEBUG001 0
*
* NAME OF THE NUCLIDE TO BE LISTED ON THE DISPERSION LISTINGS
*
*OCNUCOUT001 Cs-137
*
* NUMO NO TABLES OUTPUT=0
TYEONUMBER 0
*
* INDREL INDRAD
*TYPEOCOUT001 1 4
*TYPEOCOUT002 1 10 XCONF
* *****
* METEOROLOGICAL SAMPLING DATA BLOCK
*
* METEOROLOGICAL SAMPLING OPTION CODE:
*
* METHOD = 1, USER SPECIFIED DAY AND HOUR IN THE YEAR (FROM MET FILE),
* 2, WEATHER CATEGORY BIN SAMPLING,

```



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	

Calc No.	2009-11222		
Rev.	2	Date	
Page	A.2-10	of A.2-12	

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

Prepared by		Date	
Reviewed by		Date	
Approved by		Date	

Page 7 of 9

```

*      3, 120 HOURS OF WEATHER SPECIFIED ON THE ATMOS USER INPUT FILE,
*      4, CONSTANT MET (BOUNDARY WEATHER USED FROM THE START),
*      5, STRATIFIED RANDOM SAMPLES FOR EACH DAY OF THE YEAR.
*
M1METCOD001  2
*
* LAST SPATIAL INTERVAL FOR MEASURED WEATHER
*
M2LIMSEAC001 10          (ADJUSTED FOR RADIAL INTVL)
*
* BOUNDARY WEATHER MIXING LAYER HEIGHT
*
M2BNDMXH001 1500.      (METERS; used by Westinghouse)
*
* BOUNDARY WEATHER STABILITY CLASS INDEX
*
M2IBDSTB001  4          (D-STABILITY; Westinghouse used 5 for F class)
*
* BOUNDARY WEATHER RAIN RATE
*
M2BNDRAM001  0.         (MM/HR)
*
* BOUNDARY WEATHER WIND SPEED
*
M2BNDWIND001 2.0        (M/S; used by Westinghouse)
*
* NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
*
M4NRKINT001  5
*
*          nureg 4551 (4:page a-9)
* ENDPOINTS OF THE RAIN DISTANCE INTERVALS (KILOMETERS)
*
* NOTE:  THESE MUST BE CHOSEN TO MATCH THE SPATIAL ENDPOINT DISTANCES
* SPECIFIED FOR ARRAY SPAREND (10 % ERROR IS ALLOWED).
*
M4RNDSTS001  3.22  5.05  16.09  48.28  80.47  KM
*
* NUMBER OF RAIN INTENSITY BREAKPOINTS
*
M4NRINTN001  3
*
* RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
*
M4RRRATE001  2.  4.  6.
*
* NUMBER OF SAMPLES PER BIN
*
M4NSMFLS001  4  (THIS NUMBER SHOULD BE SET TO AT LEAST 4 WHEN METCOD=2)
*
* INITIAL SEED FOR RANDOM NUMBER GENERATOR
*
M4IRSEED001  79
***** RELEASE DATA BLOCK *****
* SOURCE TERM NUMBER 1 OF 6
*
RDATAAM2001 'CFI'
RDCALARM001 2924. * value provided by Westinghouse for all source terms
RDNUMREL001 4 *four plume segments
RDMAXRIS001 1 *first plume segment carries greatest risk
RDREFTIM001 0.5 0.5 0.5 0.5

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222
Rev. 2	Date
Page	A.2-11 of A.2-12

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

Page 8 of 9

```

RDFLHEAT001 0.0 0.0 0.0 0.0 'neglects buoyant plume rise
RDFLHITE001 0. 0. 0. 0. 'Release heights of each plume (meters above grade)
RDFLUDUR001 29666. 36000. 36000. 36000. 'Pl dur=Tbl49-2 values But lim to 10 hrs
RDFDELAY001 2924. 32890. 86420. 172800. 'start at Table 49-2 values
* NE/KR I CS TE(SB) SR RU(MO) LA CE BA
RDFELERC001 5.40E-1 3.19E-3 3.16E-3 4.18E-4 2.11E-2 9.11E-3 3.93E-3 2.64E-5 1.62E-2
RDFELERC002 2.88E-1 1.35E-4 1.35E-4 1.67E-5 6.50E-4 1.68E-4 4.83E-3 1.68E-5 3.40E-4
RDFELERC003 3.40E-2 0.00E0 0.00E0 4.47E-6 0.00E0 0.00E0 6.00E-3 2.17E-5 0.00E0
RDFELERC004 3.88E-2 0.00E0 0.00E0 1.57E-6 0.00E0 0.00E0 5.22E-3 1.39E-5 0.00E0
.
***** RELEASE DATA BLOCK *****
* SOURCE TERM NUMBER 2 OF 6
.
RDATAAM2001 'CFE'
RDCALARM001 3004.
RDNUMREL001 4 'four plume segments
RDMAXRIS001 1 'first plume segment carries greatest risk
'RDFEFTIM001 'defined in source term 1
'RDFLHEAT001 'defined in source term 1
'RDFLHITE001 'defined in source term 1
RDFLUDUR001 16806. 36000. 36000. 36000. 'Pl dur=Tbl49-2 values But lim to 10 hrs
RDFDELAY001 3004. 19810. 89970. 176300. 'start at Table 49-2 seconds after scram
* NE/KR I CS TE(SB) SR RU(MO) LA CE BA
RDFELERC001 4.16E-1 5.58E-2 5.37E-2 1.23E-3 3.14E-3 1.16E-2 5.57E-5 9.54E-7 4.63E-3
RDFELERC002 4.06E-1 1.26E-3 1.21E-3 1.82E-4 3.43E-4 2.58E-3 9.68E-6 4.86E-5 6.45E-4
RDFELERC003 1.08E-1 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
RDFELERC004 3.43E-2 0.00E0 0.00E0 6.04E-7 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
.
***** RELEASE DATA BLOCK *****
* SOURCE TERM NUMBER 3 OF 6
.
RDATAAM2001 'IC'
RDCALARM001 4378.
RDNUMREL001 4 'four plume segments
RDMAXRIS001 1 'first plume segment carries greatest risk
'RDFEFTIM001 'defined in source term 1
'RDFLHEAT001 'defined in source term 1
'RDFLHITE001 'defined in source term 1
RDFLUDUR001 36000. 36000. 36000. 36000. 'Pl dur=Tbl49-2 values But lim to 10 hrs
RDFDELAY001 4378. 84810. 134400. 177600. 'start at Table 49-2 seconds after scram
* NE/KR I CS TE(SB) SR RU(MO) LA CE BA
RDFELERC001 9.82E-4 1.20E-5 1.16E-5 8.04E-7 1.07E-5 1.31E-5 1.35E-6 5.38E-9 1.20E-5
RDFELERC002 4.98E-4 0.00E0 0.00E0 4.83E-9 0.00E0 0.00E0 6.00E-9 3.20E-11 0.00E0
RDFELERC003 3.94E-4 0.00E0 0.00E0 1.21E-9 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
RDFELERC004 7.72E-4 0.00E0 0.00E0 6.04E-10 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
.
***** RELEASE DATA BLOCK *****
* SOURCE TERM NUMBER 4 OF 6
.
RDATAAM2001 'BF'
RDCALARM001 31890.
RDNUMREL001 4 'four plume segments
RDMAXRIS001 1 'first plume segment carries greatest risk
'RDFEFTIM001 'defined in source term 1
'RDFLHEAT001 'defined in source term 1
'RDFLHITE001 'defined in source term 1
RDFLUDUR001 14550. 36000. 36000. 36000. 'Pl dur=Tbl49-2 values But lim to 10 hrs
RDFDELAY001 31890. 46440. 86490. 172500. 'start at Table 49-2 seconds after scram
* NE/KR I CS TE(SB) SR RU(MO) LA CE BA
RDFELERC001 1.00E0 1.69E-1 1.62E-1 6.27E-3 3.57E-3 4.48E-2 1.30E-4 3.19E-6 8.99E-3

```



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	A.2-12 of A.2-12		

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

Prepared by		Date	
Reviewed by		Date	
Approved by		Date	

Page 9 of 9

```

RDRELFRC002 0.00E0 4.64E-2 3.38E-2 3.12E-3 0.00E0 0.00E0 0.00E0 0.00E0 2.00E-6
RDRELFRC003 0.00E0 2.31E-1 6.60E-2 5.32E-3 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
RDRELFRC004 0.00E0 2.80E-3 9.96E-3 1.57E-3 0.00E0 0.00E0 0.00E0 1.00E-6 0.00E0
.
***** RELEASE DATA BLOCK *****
* SOURCE TERM NUMBER 5 OF 6
.
RDATA02001 'CE'
RDCALARM001 101.
RDNUMREL001 4 *four plume segments
RDMAXRIS001 1 *first plume segment carries greatest risk
*RDREFTIM001 *defined in source term 1
*RDPLHEAT001 *defined in source term 1
*RDPLHITE001 *defined in source term 1
RDELUDUR001 36000. 36000. 36000. 36000. *Pl dur=Tbl49-2 values But lim to 10 hrs
RDEDELAY001 101. 50020. 136400. 211700. *start at Table 49-2 seconds after scram
* KE/KR I CS TE(5B) SR RU(MC) LA CE BA
RDRELFRC001 5.78E-1 4.56E-2 2.10E-2 1.64E-3 2.03E-2 4.04E-2 2.39E-4 2.97E-6 3.16E-2
RDRELFRC002 1.13E-1 0.00E0 0.00E0 1.15E-5 0.00E0 0.00E0 1.00E-7 0.00E0 0.00E0
RDRELFRC003 5.66E-2 0.00E0 0.00E0 3.10E-5 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
RDRELFRC004 2.74E-2 0.00E0 0.00E0 1.27E-5 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
.
***** RELEASE DATA BLOCK *****
* SOURCE TERM NUMBER 6 OF 6
.
RDATA02001 'CFL'
RDCALARM001 2922.
RDNUMREL001 4 *four plume segments
RDMAXRIS001 3 *third segment is largest noble gas/i/cs release
*RDREFTIM001 *defined in source term 1
*RDPLHEAT001 *defined in source term 1
*RDPLHITE001 *defined in source term 1
RDELUDUR001 23432. 36000. 36000. 36000. *Pl dur=Tbl49-2 values But lim to 10 hrs
RDEDELAY001 2922. 26360. 108000. 194400. *start at Table 49-2 seconds after scram
* KE/KR I CS TE(5B) SR RU(MC) LA CE BA
RDRELFRC001 3.36E-4 1.20E-5 1.15E-5 1.00E-6 1.57E-5 1.68E-5 9.96E-7 7.41E-9 1.61E-5
RDRELFRC002 1.19E-3 5.00E-8 3.23E-8 1.75E-8 1.04E-6 2.90E-7 1.07E-5 4.08E-8 6.60E-7
RDRELFRC003 9.79E-1 2.12E-5 1.16E-5 2.47E-5 2.39E-3 1.26E-3 9.76E-2 3.68E-4 2.25E-3
RDRELFRC004 0.00E0 0.00E0 2.56E-7 1.20E-5 4.42E-4 1.55E-4 4.39E-2 1.66E-4 3.46E-4
.

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.3-1	of A.3-10

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT A.3
US-APWR MACCS2 Vendor Data



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	

Calc No.	2009-11222		
Rev.	2	Date	
Page	A.3-2	of A.3-10	

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

Prepared by		Date	
Reviewed by		Date	
Approved by		Date	

Nuclear Development
244 Chestnut St., Salem NJ 08079



September 1, 2009
ND-2009-0068

Barry Craig
Vice President New Plant Development
Mitsubishi Nuclear Energy Systems, Inc.
601 Heritage Drive, Suite 229
Jupiter, FL 33458

SUBJECT: SEVERE ACCIDENT SCENARIO SPECIFIC INFORMATION REQUIRED FOR INPUT TO MACCS

As you are aware, PSEG Power LLC (PSEG) has begun preparing an Early Site Permit Application (ESPA) for its nuclear facility in southern New Jersey. To date, PSEG has not selected a reactor technology to build at the site and is currently considering a number of options.

To support the consequence analysis for severe accidents (ER Section 7.2) of the PSEG Early Site Permit Application, the scenario specific information required for input to MACCS is needed. This information includes the following.

1. A description of the severe accident scenarios if different from the description in the DCD.
2. The reactor core inventory by nuclide.
3. For each scenario, the release fraction by nuclide group and corresponding frequencies.
4. Timing of the release (i.e., beginning and duration of release, alarm time).
5. Other modeling parameters, such as release height, dilution, etc.

We request the response to this RFI be transmitted to Jamie Mallon via email (james.mallon@pseg.com) no later than September 14, 2009.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.3-3	of A.3-10

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

MACCS Input
ND-2009-0068

Your assistance in this effort is appreciated and necessary, as your input will allow PSEG to prepare the highest quality submittal possible to the NRC. Should you have any questions relating to this request, please contact either Jamie Mallon, PSEG, at 856-339-7908 or Mike Shervin, S&L, at 302-622-7250.

Sincerely,

David Lewis
Executive Director
Nuclear Development
PSEG Power



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.3-4	of A.3-10

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

6CS-1E-KAIGAI-090002 (3/9)

Table of Contents

	Page
1. INTRODUCTION	4
2. FISSION PRODUCT SOURCE TERM DATA	4
2.1 SOURCE TERM RELEASE FRACTION	4
2.2 CORE FISSION PRODUCT INVENTORY	5
2.3 OTHER SOURCE TERM	5
(1) Alarm Time after Accident	5
(2) Number of Plume Releases	5
(3) Plume Heat in Watts	5
(4) Plume Release Height	5
(5) Plume Duration	5
(6) Plume Delay	5
(7) Wake Effects Data	6
3. CORE THERMAL POWER	6



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.3-5	of A.3-10

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

6CS-1E-KAIGAI-090002 (4/9)

1. Introduction

This document provides the information on severe accidents for US-APWR. The following information is included in this document.

- Source term release fractions for each release category (from PRA)
- Core fission product inventory
- Alarm time after accident, number of plume releases, plume heat in Watts, plume release height, plume duration, and plume delay for each release category
- Core thermal power

2. Fission Product Source Term Data

The fission product source term assessed by the MAAP code is provided as the accidental release conditions. These conditions include the fission product release fractions, release height, release energy, release duration and wake effects data. They are listed as follows.

2.1 Source Term Release Fraction

Table 1 shows the representative source term release fractions for each release category as well as for duration of each plume. The release categories are summarized below.

- R1 : Containment Bypass – Containment bypass which includes both core damage after SGTR and thermal induced SGTR after core damage
- R2 : Containment Isolation Failure
- R3 : Containment Failure before Core Damage – This category is for an overpressure failure before core damage due to loss of heat removal
- R4 : Early containment failure – This is containment failure condition due to dynamic loads which includes hydrogen combustion before or just after reactor vessel failure, in-vessel or ex-vessel steam explosion and containment direct heating.
- R5 : Late Containment Failure – This failure of the containment includes overpressure failure after core damage, hydrogen combustion failure after core damage, hydrogen combustion long after reactor vessel failure and basemat melt-through
- R6 : Intact Containment – This condition assumes an intact containment throughout the sequence and fission products are released at the design leak rate.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.3-6	of A.3-10

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

6CS-1E-KAIGAI-090002 (5/9)

2.2 Core Fission Product Inventory

The radionuclide inventories are calculated by ORIGEN2.2 code. The core inventory for the US-APWR is obtained using the thermal power level by adjusting the end-of-cycle values (See Table 3).

2.3 Other Source Term

(1) Alarm Time after Accident

Table 2 shows core melt time which is equal to alarm time after accident. It is necessary to note that MHI did not perform to evaluate RC5, because RC5 is no release within 24 hours after Core Melt.

(2) Number of Plume Releases

The number of plume release sets 4 groups. (See Table1.)

(3) Plume Heat in Watts

Release Energy is a parameter which has influence for plume ascent, when plume is released. Release Energy is established 0 watt conservatively.

(4) Plume Release Height

Plume release height is established 0 meter from ground conservatively.

(5) Plume Duration

Table 1 shows plume durations.

(6) Plume Delay

Table 1 shows plume release start time of each release categories.



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.3-7	of A.3-10

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

6CS-1E-KAIGAI-090002 (6/9)

(7) Wake Effects Data

The initial size of plumes is determined by the width and height of the building wake. In MACCS, the initial plume dimensions were initialized to fixed fractions of the user specified building dimensions. σ_y was initialized to the building width divided by 4.3, and σ_z was initialized to the building height divided by 2.15. The US-APWR values are shown below.

- The building width equal 48.1m (SIGMYINIT=11.2m)
- The building height equal 64.7m (SIGMZINIT =30.1m)

3. Core thermal power

In the severe accident analyses, the value 4451 MWt is also used as core thermal power.

Client PSEG Nuclear Development Project PSEG ESPA Proj. No 12380-001	Prepared by _____ Date _____ Reviewed by _____ Date _____ Approved by _____ Date _____
--	--

6CS-1E-KAIGAI-090002 (7/8)

Table 1 Source Term Input Data for US-APWR Release Categories.

Release category	Plume No.	START TIME (seconds)	END TIME (seconds)	Duration (seconds)	Release Fraction (MACCS2 Group)									Plume Position
					1 Kr/Xe	2 I	3 Cs	4 Te/Sb	5 Sr	6 Ru	7 La	8 Ce	9 Ba	
RC1	1	1.02E+05	1.17E+05	1.52E+04	6.88E-01	1.96E-01	1.56E-01	8.55E-02	3.49E-04	1.45E-02	1.47E-05	4.34E-05	2.90E-03	Leading
	2	1.17E+05	1.53E+05	3.60E+04	2.48E-01	8.73E-02	3.91E-02	3.91E-02	4.55E-03	3.87E-03	2.25E-04	2.38E-04	8.82E-03	Midpoint
	3	1.53E+05	2.39E+05	8.64E+04	2.72E-03	4.03E-03	8.47E-03	7.88E-03	3.71E-03	4.21E-03	2.12E-03	1.35E-03	3.50E-03	Midpoint
	4	2.39E+05	3.26E+05	8.64E+04	4.87E-03	2.29E-03	2.66E-03	6.09E-04	1.85E-04	7.59E-05	6.23E-04	5.30E-04	9.68E-05	Midpoint
RC2	1	9.01E+03	4.18E+04	3.28E+04	7.31E-01	3.61E-02	2.13E-02	3.56E-02	5.14E-03	1.50E-02	3.62E-03	1.95E-03	8.12E-03	Leading
	2	4.18E+04	9.50E+04	5.32E+04	2.38E-01	3.22E-02	4.19E-03	7.24E-03	2.61E-04	7.07E-04	4.01E-04	3.65E-04	4.38E-04	Midpoint
	3	9.50E+04	1.63E+05	6.81E+04	2.20E-02	1.65E-01	1.16E-02	2.86E-02	1.23E-03	4.00E-05	5.18E-05	1.58E-04	1.50E-03	Midpoint
	4	1.63E+05	2.49E+05	8.64E+04	5.37E-03	4.70E-02	5.46E-03	5.88E-03	1.11E-03	6.12E-05	5.64E-05	2.47E-04	1.11E-03	Midpoint
RC3	1	1.70E+05	2.11E+05	4.12E+04	9.38E-01	4.70E-01	4.58E-01	4.19E-01	4.22E-02	2.71E-01	1.49E-03	6.33E-03	1.02E-01	Leading
	2	2.11E+05	2.55E+05	4.39E+04	4.74E-02	8.37E-03	6.51E-03	6.41E-03	1.77E-03	4.94E-03	6.60E-05	8.66E-05	3.49E-03	Leading
	3	2.55E+05	3.39E+05	8.34E+04	1.45E-03	1.03E-03	1.11E-03	2.84E-03	4.37E-04	1.84E-04	6.37E-06	6.00E-05	2.24E-04	Midpoint
	4	3.39E+05	4.25E+05	8.64E+04	5.54E-04	2.46E-04	1.80E-05	1.49E-03	5.37E-05	0.00E+00	2.33E-07	2.75E-06	2.42E-05	Midpoint
RC4	1	7.80E+04	9.38E+04	1.58E+04	9.98E-01	3.79E-02	3.29E-02	4.88E-02	4.53E-03	2.38E-02	1.21E-04	3.67E-04	2.29E-02	Leading
	2	9.38E+04	1.25E+05	3.17E+04	1.56E-03	1.66E-02	8.59E-03	3.77E-03	3.05E-04	2.79E-03	6.78E-07	3.49E-06	5.64E-04	Midpoint
	3	1.25E+05	2.12E+05	8.63E+04	2.72E-04	7.50E-03	3.40E-03	7.78E-03	1.32E-03	1.08E-05	1.51E-05	4.73E-04	4.69E-04	Leading
	4	2.12E+05	2.98E+05	8.64E+04	1.04E-04	6.34E-03	1.11E-03	2.78E-03	1.51E-06	0.00E+00	3.05E-08	9.57E-07	9.97E-07	Midpoint
RC5	1	1.89E+05	1.99E+05	1.01E+04	9.28E-01	2.72E-03	1.06E-03	6.42E-03	8.05E-05	9.95E-05	2.99E-05	1.87E-05	6.61E-05	Leading
	2	1.99E+05	2.59E+05	6.03E+04	3.53E-02	2.23E-02	4.21E-03	2.53E-03	1.45E-06	1.92E-06	5.29E-07	3.42E-07	1.60E-06	Midpoint
	3	2.59E+05	3.42E+05	8.31E+04	1.83E-02	6.02E-02	8.03E-03	3.11E-03	5.15E-07	1.70E-06	5.69E-08	4.62E-08	1.30E-06	Midpoint
	4	3.42E+05	4.29E+05	8.64E+04	6.47E-03	5.72E-02	6.42E-03	4.56E-03	1.64E-06	9.22E-07	2.10E-09	1.29E-08	3.67E-06	Midpoint
RC6	1	1.27E+03	1.49E+04	1.37E+04	1.24E-04	1.68E-06	1.66E-06	1.30E-06	1.55E-07	6.31E-07	3.19E-09	5.31E-09	2.44E-07	Leading
	2	1.49E+04	8.77E+04	7.27E+04	6.54E-04	1.46E-09	0.00E+00	6.96E-09	1.79E-08	6.46E-09	2.85E-10	2.76E-10	2.45E-08	Midpoint
	3	8.77E+04	1.74E+05	8.64E+04	6.90E-04	1.86E-09	0.00E+00	5.08E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	Midpoint
	4	1.74E+05	2.60E+05	8.63E+04	6.45E-04	0.00E+00	0.00E+00	8.86E-11	6.46E-11	4.43E-11	4.55E-13	1.23E-12	6.38E-11	Midpoint

Calcs. For **ENVIRONMENTAL CONSEQUENCE**
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page A.3-9 of A.3-10

Safety Related Non-Safety Related

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

Table 2 summary of core melt time

Release category	CORE MELT	Plume No.	START TIME (seconds)	Duration (seconds)	Description
	after 24hours after 72hours				
RC1	-	1	1.02E+05	1.52E+04	START TIME is start time of Gap release
	1.05E+05	2	1.17E+05	3.60E+04	
	1.91E+05	3	1.53E+05	8.64E+04	
	3.64E+05	4	2.39E+05	8.64E+04	
RC2	-	1	9.01E+03	3.28E+04	START TIME is start time of Gap release
	1.16E+04	2	4.18E+04	5.32E+04	
	9.80E+04	3	9.50E+04	6.81E+04	
	2.71E+05	4	1.63E+05	8.64E+04	
RC3	-	1	1.70E+05	4.12E+04	START TIME is start time of Gap release
	1.72E+05	2	2.11E+05	4.39E+04	
	2.58E+05	3	2.55E+05	8.34E+04	
	4.31E+05	4	3.39E+05	8.64E+04	
RC4	-	1	7.80E+04	1.58E+04	No release within 24 hours after Core Melt
	1.83E+04	2	9.38E+04	3.17E+04	
	1.05E+05	3	1.25E+05	8.63E+04	
	2.77E+05	4	2.12E+05	8.64E+04	
RC5	-	1	1.89E+05	1.01E+04	START TIME is start time of Gap release
	1.16E+04	2	1.99E+05	6.03E+04	
	9.80E+04	3	2.59E+05	8.31E+04	
	2.71E+05	4	3.42E+05	8.64E+04	
RC6	-	1	1.27E+03	1.37E+04	START TIME is start time of Gap release
	1.80E+03	2	1.49E+04	7.27E+04	
	8.82E+04	3	8.77E+04	8.64E+04	
	2.61E+05	4	1.74E+05	8.63E+04	

GCS-1E-KAIGAI-090002 (8/8)



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	

Calc No.	2009-11222		
Rev.	2	Date	
Page	A.3-10	of A.3-10	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

6CS-1E-KAIGAI-090002 (9/9)

Table 3 Core Fission Product Inventory (Ci/core)

NUCLIDE	Core Inventory
Co-58	0.00E+00
Co-60	4.26E+05
Kr-85	1.70E+06
Kr-85m	3.04E+07
Kr-87	5.79E+07
Kr-88	8.14E+07
Rb-86	3.33E+05
Sr-89	1.11E+08
Sr-90	1.36E+07
Sr-91	1.38E+08
Sr-92	1.50E+08
Y-90	1.44E+07
Y-91	1.44E+08
Y-92	1.51E+08
Y-93	1.76E+08
Zr-95	2.07E+08
Zr-97	2.10E+08
Nb-95	2.09E+08
Mo-99	2.27E+08
Tc-99m	1.99E+08
Ru-103	1.90E+08
Ru-105	1.32E+08
Ru-106	7.38E+07
Rh-105	1.23E+08
Sb-127	1.34E+07
Sb-129	3.95E+07
Te-127	1.33E+07
Te-127m	1.77E+06
Te-129	3.89E+07
Te-129m	5.80E+06
Te-131m	1.76E+07
Te-132	1.71E+08
I-131	1.21E+08
I-132	1.74E+08
I-133	2.43E+08
I-134	2.66E+08

NUCLIDE	Core Inventory
I-135	2.27E+08
Xe-133	2.44E+08
Xe-135	6.89E+07
Cs-134	3.32E+07
Cs-136	9.05E+06
Cs-137	1.89E+07
Ba-139	2.16E+08
Ba-140	2.09E+08
La-140	2.18E+08
La-141	1.97E+08
La-142	1.90E+08
Ce-141	1.99E+08
Ce-143	1.82E+08
Ce-144	1.61E+08
Pr-143	1.79E+08
Nd-147	7.97E+07
Np-239	2.54E+09
Pu-238	7.32E+05
Pu-239	5.53E+04
Pu-240	8.67E+04
Pu-241	1.92E+07
Am-241	2.59E+04
Cm-242	6.42E+06
Cm-244	7.80E+05
U-230	1.17E-05
U-231	3.55E-03
U-232	1.69E+00
U-233	6.95E-04
U-234	3.34E+00
U-235	3.38E+00
U-236	4.93E+01
U-237	1.61E+08
U-238	4.32E+01
U-239	2.54E+09
U-240	2.60E+03
U-241	4.34E-03



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.4-1	of A.4-12

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT A.4
U.S. EPR MACCS2 Vendor Data



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	A.4-2	of	A.4-12

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

Prepared by		Date	
Reviewed by		Date	
Approved by		Date	



November 5, 2012
AREVA-12-03370

Jamie Mallon
Early Site Permit Manager
PSEG
244 Chestnut Street
Salem, NJ 08079

Subject: PSEG Environmental Site Permit (ESP) Application Data Request

References: Response to PSEG Data Request ND-2009-0069

Dear Mr. Mallon:

The referenced enclosure provides the information originally transmitted to PSEG in 2009 in support of PSEG's ESP Application needs. AREVA recently reviewed PSEG's request to use the information in responding to the NRC for associated RAI's. AREVA has determined the enclosed AREVA U.S. EPR™ information is AREVA Non-Propriety.

Therefore, PSEG can use the attached AREVA information to publicly respond to NRC RAI questions. If you have any further questions please contact me at 434-832-4664.

Regards,

Martin Owens
Principal Project Manager
US EPR COLA and Site Licensing Projects

- c: David Robillard, PSEG
- Mike Wiwel, PSEG
- Jen Butler, AREVA Inc.
- Stanley Levinson, AREVA Inc.
- Darrell Gardner, AREVA Inc.
- Russ Wells, AREVA Inc.
- Records Center – T1.2/F.500440



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.4-3	of A.4-12

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

Response to PSEG Data Request ND-2009-0069

The subject letter from PSE&G contained the following request:

To support the consequence analysis for severe accidents (ER Section 7.2) of the PSEG Early Site Permit Application, the scenario specific information required for input to MACCS is needed. This information includes the following.

1. A description of the severe accident scenarios if different from the description in the DCD.
2. The reactor core inventory by nuclide.
3. For each scenario, the release fraction by nuclide group and corresponding frequencies.
4. Timing of the release (i.e., beginning and duration of release, alarm time).
5. Other modeling parameters, such as release height, dilution, etc.

The following pages contain a response to this request:



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.4-4	of A.4-12

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

Item 1: A description of the severe accident scenarios if different from the description in the DCD.

The most concise description of the severe accident scenarios is contained in the table of Release Categories. This table has been updated since the submittal of the DCD

Release Category	Description
RC101	No containment failure
RC201	Containment fails before vessel breach due to isolation failure, melt retained in vessel
RC202	Containment fails before vessel breach due to isolation failure, melt released from vessel, with MCCI, melt not flooded ex-vessel, with containment sprays
RC203	Containment fails before vessel breach due to isolation failure, melt released from vessel, with MCCI, melt not flooded ex-vessel, without containment sprays
RC204	Containment fails before vessel breach due to isolation failure, melt released from vessel, without MCCI, melt flooded ex-vessel with containment sprays
RC205	Containment failures before vessel breach due to isolation failure, melt released from vessel, without MCCI, melt flooded ex-vessel without containment sprays
RC206	Small containment failure due to failure to isolate 2" or smaller lines
RC301	Containment fails before vessel breach due to containment rupture, with MCCI, melt not flooded ex-vessel, with containment sprays
RC302	Containment fails before vessel breach due to containment rupture, with MCCI, melt not flooded ex-vessel, without containment sprays
RC303	Containment fails before vessel breach due to containment rupture, without MCCI, melt flooded ex-vessel, with containment sprays
RC304	Containment fails before vessel breach due to containment rupture, without MCCI, melt flooded ex-vessel, without containment sprays
RC401	Containment failures after breach and up to melt transfer to the spreading area, with MCCI, without debris flooding, with containment spray
RC402	Containment failures after breach and up to melt transfer to the spreading area, with MCCI, without debris flooding, without containment spray
RC403	Containment failures after breach and up to melt transfer to the spreading area, without MCCI, with debris flooding, with containment spray
RC404	Containment failures after breach and up to melt transfer to the spreading area, without MCCI, with debris flooding, without containment spray
RC501	Long term containment failure during and after debris quench, due to rupture, with MCCI, without debris flooding, with containment sprays
RC502	Long term containment failure during and after debris quench, due to rupture, with MCCI, without debris flooding, without containment sprays
RC503	Long term containment failure during and after debris quench, due to rupture, without MCCI, with debris flooding, with containment sprays
RC504	Long term containment failure during and after debris quench, due to rupture, without MCCI, with debris flooding, without containment sprays
RC602	Long term containment failure due to basemat failure, without debris flooding, without containment sprays
RC701	Steam Generator Tube Rupture with fission product scrubbing
RC702	Steam Generator Tube Rupture without fission product scrubbing
RC802	Interfacing System LOCA without fission product scrubbing



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.4-5 of A.4-12	

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

Item 2: The Reactor Core Inventory by Nuclide

The table below is the core inventory used in the MACCS2 analysis.

U.S. EPR™ Design Core Inventory in Curies and Becquerels

Radioisotope	Bounding Core Inventory (curies)	Bounding Core Inventory (becquerels)	Radioisotope	Bounding Core Inventory (curies)	Bounding Core Inventory (becquerels)
Kr-85	2.10E+06	7.77E+16	Te-132	1.98E+08	7.33E+18
Kr-85m	4.50E+07	1.66E+18	I-131	1.39E+08	5.14E+18
Kr-87	9.02E+07	3.34E+18	I-132	2.01E+08	7.44E+18
Kr-88	1.29E+08	4.77E+18	I-133	2.90E+08	1.07E+19
Rb-86	5.80E+05	2.15E+16	I-134	3.18E+08	1.18E+19
Sr-89	1.61E+08	5.96E+18	I-135	2.69E+08	9.95E+18
Sr-90	1.69E+07	6.25E+17	Xe-133	2.89E+08	1.07E+19
Sr-91	2.07E+08	7.66E+18	Xe-135	9.26E+07	3.43E+18
Sr-92	2.14E+08	7.92E+18	Cs-134	6.48E+07	2.40E+18
Y-90	1.79E+07	6.62E+17	Cs-136	1.61E+07	5.96E+17
Y-91	1.96E+08	7.25E+18	Cs-137	2.47E+07	9.14E+17
Y-92	2.14E+08	7.92E+18	Ba-139	2.62E+08	9.69E+18
Y-93	2.34E+08	8.66E+18	Ba-140	2.52E+08	9.32E+18
Zr-95	2.29E+08	8.47E+18	La-140	2.54E+08	9.40E+18
Zr-97	2.43E+08	8.99E+18	La-141	2.41E+08	8.92E+18
Nb-95	2.29E+08	8.47E+18	La-142	2.35E+08	8.69E+18
Mo-99	2.59E+08	9.58E+18	Ce-141	2.24E+08	8.29E+18
Tc-99m	2.27E+08	8.40E+18	Ce-143	2.28E+08	8.44E+18
Ru-103	2.42E+08	8.95E+18	Ce-144	1.70E+08	6.29E+18
Ru-105	1.96E+08	7.25E+18	Pr-143	2.26E+08	8.36E+18
Ru-106	1.43E+08	5.29E+18	Nd-147	9.44E+07	3.49E+18
Rh-105	1.75E+08	6.47E+18	Np-239	3.82E+09	1.41E+20
Sb-127	1.80E+07	6.66E+17	Pu-238	1.46E+06	5.40E+16
Sb-129	4.85E+07	1.79E+18	Pu-239	6.14E+04	2.27E+15
Te-127	1.79E+07	6.62E+17	Pu-240	1.40E+05	5.18E+15
Te-127m	2.43E+06	8.99E+16	Pu-241	2.53E+07	9.36E+17
Te-129	4.78E+07	1.77E+18	Am-241	2.88E+04	1.07E+15
Te-129m	7.08E+06	2.62E+17	Cm-242	1.31E+07	4.85E+17
Te-131m	2.04E+07	7.55E+17	Cm-244	6.94E+06	2.57E+17

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Item 3: Release Category Release Fractions and Frequencies

The table below shows the fission product release fractions for the 9 fission product groups in MACCS2:

MAACS2 Fission Product Group	XE/KR	I	Cs	Te	Sr	Ru	La	Ce	Ba
MAAP	1	2	3	4	5	6	7	8	9
	1	2	6	3,10,11	4	5	8	9,12	7
RC101	1.9E-3	2.4E-5	2.0E-5	5.3E-5	8.5E-6	4.4E-5	2.8E-7	7.3E-7	2.4E-5
RC201	3.6E-1	1.0E-1	9.5E-2	7.6E-3	7.8E-5	1.1E-3	3.4E-6	1.7E-5	4.1E-4
RC202	7.9E-1	2.3E-2	1.5E-2	2.0E-2	2.4E-4	3.4E-3	1.9E-5	6.8E-5	2.4E-3
RC203	8.9E-1	5.3E-2	2.8E-2	1.6E-1	1.4E-4	6.8E-3	1.5E-5	2.4E-4	2.2E-3
RC204	9.5E-1	2.8E-2	1.6E-2	3.6E-2	1.7E-4	5.3E-3	1.4E-5	6.2E-5	3.2E-3
RC205	9.8E-1	5.7E-2	3.6E-2	9.3E-2	4.0E-3	9.8E-3	3.0E-4	5.3E-4	6.1E-3
RC206	1.9E-1	5.6E-3	5.0E-3	9.0E-3	1.2E-3	7.3E-3	5.5E-5	1.8E-4	4.2E-3
RC301	7.9E-1	2.3E-2	1.5E-2	2.0E-2	2.4E-4	3.4E-3	1.9E-5	6.8E-5	2.4E-3
RC302	8.9E-1	5.3E-2	2.8E-2	1.6E-1	1.4E-4	6.8E-3	1.5E-5	2.4E-4	2.2E-3
RC303	9.5E-1	2.8E-2	1.6E-2	3.6E-2	1.7E-4	5.3E-3	1.4E-5	6.2E-5	3.2E-3
RC304	9.8E-1	5.7E-2	3.6E-2	9.3E-2	4.0E-3	9.8E-3	3.0E-4	5.3E-4	6.1E-3
RC401	8.0E-1	4.6E-3	2.3E-3	3.4E-3	2.7E-3	1.5E-3	8.0E-5	3.4E-4	5.2E-3
RC402	9.7E-1	2.0E-2	1.0E-2	1.2E-2	3.8E-3	2.1E-3	1.1E-4	4.9E-4	7.3E-3
RC403	8.0E-1	4.6E-3	2.3E-3	3.4E-3	2.7E-3	1.5E-3	8.0E-5	3.4E-4	5.2E-3
RC404	9.7E-1	2.0E-2	1.0E-2	1.2E-2	3.8E-3	2.1E-3	1.1E-4	4.9E-4	7.3E-3
RC501	9.9E-1	7.7E-4	4.0E-4	1.7E-2	7.4E-6	4.4E-5	2.2E-7	7.0E-7	2.4E-5
RC502	9.9E-1	7.7E-4	4.0E-4	1.7E-2	7.4E-6	4.4E-5	2.2E-7	7.0E-7	2.4E-5
RC503	1.0E+0	4.1E-4	6.9E-5	5.1E-5	8.5E-6	4.4E-5	2.8E-7	7.3E-7	2.4E-5
RC504	1.0E+0	4.1E-4	6.9E-5	5.1E-5	8.5E-6	4.4E-5	2.8E-7	7.3E-7	2.4E-5
RC602	9.9E-1	7.7E-4	4.0E-4	1.7E-2	7.4E-6	4.4E-5	2.2E-7	7.0E-7	2.4E-5
RC701	1.1E-1	4.2E-3	4.4E-3	6.9E-3	6.0E-4	4.8E-3	2.2E-5	1.1E-4	2.7E-3
RC702	1.1E-1	8.4E-2	8.7E-2	1.4E-1	1.2E-2	9.6E-2	4.5E-4	2.2E-3	5.4E-2
RC802	9.8E-1	7.1E-1	6.9E-1	6.4E-1	1.3E-1	5.7E-1	3.9E-3	2.2E-2	3.8E-1



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.4-7	of A.4-12

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

Below is the table of the frequency for each release category:

Release Category	Frequency [1/yr]
RC101	3.43E-07
RC201	4.98E-10
RC202	3.97E-14
RC203	1.92E-12
RC204	2.78E-11
RC205	4.08E-10
RC206	1.65E-08
RC301	1.67E-12
RC302	2.18E-11
RC303	2.30E-09
RC304	1.75E-08
RC401	1.38E-11
RC402	2.75E-10
RC403	6.82E-10
RC404	1.34E-08
RC501	5.92E-13
RC502	2.87E-10
RC503	6.01E-10
RC504	1.19E-07
RC602	6.50E-10
RC701	1.02E-08
RC702	5.38E-09
RC802	2.64E-10
Sum	5.31E-07

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related
Project	PSEG ESPA			
Proj. No.	12380-001	Equip. No.	Prepared by	Date
			Reviewed by	Date
			Approved by	Date

For each scenario, provide the timing of the release (i.e., beginning and duration of release, alarm time) and other modeling parameters, such as release height, dilution, etc.

Release Category	RC101	RC201	RC202	RC203	RC204	RC205	RC206	RC301	RC302	RC303	RC304
OALARM (uncovery) (seconds)	8676	8460	8460	8460	8460	8460	8532	8460	8460	8460	8460
-Core Uncovery (hrs)	2.41	2.35	2.35	2.35	2.35	2.35	2.37	2.35	2.35	2.35	2.35
PLHEAT(watts)	1.81E+04	5.68E+08	2.25E+08	2.50E+08	2.60E+08	3.08E+08	2.04E+06	2.25E+08	2.50E+08	2.60E+08	3.08E+08
PLHITE (meters)	60.51	0.839	0.839	0.839	0.839	0.839	0.827	0.839	0.839	0.839	0.839
PDELAY (hrs)	4.0	3.4	3.4	3.4	3.4	3.4	3.6	3.4	3.4	3.4	3.4
PDELAY (seconds)	14400	12240	12240	12240	12240	12240	12960	12240	12240	12240	12240
PLUDUR (seconds)	57600	1080	30960	30960	29160	29160	24840	30960	30960	29160	29160
End of Release (hrs)	20	3.7	12	12	11.5	11.5	10.5	12	12	11.5	11.5

Release Category	RC401	RC402	RC403	RC404	RC501	RC502	RC503	RC504	RC602	RC702	RC701	RC802
OALARM (uncovery) (seconds)	8676	8676	8676	8676	8676	8676	8676	8676	8676	4212	4212	24228
-Core Uncovery (hrs)	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	1.17	1.17	6.73
PLHEAT(watts)	3.73E+08	3.73E+08	3.73E+08	3.73E+08	5.03E+08	5.03E+08	3.20E+09	3.20E+09	5.03E+08	1.36E+07	1.36E+07	2.36E+08
PLHITE (meters)	35.7	35.7	35.7	35.7	35.7	35.7	35.7	35.7	35.7	24.75	24.75	30.6
PDELAY (hrs)	8.9	8.9	8.9	8.9	60.0	60.0	84.0	84.0	60.0	3.3	3.3	7.9
PDELAY (seconds)	32040	32040	32040	32040	216000	216000	302400	302400	216000	11880	11880	28440
PLUDUR (seconds)	17640	57960	17640	57960	288000	288000	129600	129600	288000	24120	24120	20160
End of Release (hrs)	13.8	25	13.8	25	140	140	120	120	140	10	10	13.5



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	A.4-9	of A.4-12

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

Additional EPR™ Specific MACCS2 inputs

Calcs. For **ENVIRONMENTAL CONSEQUENCE**
ANALYSIS FOR PSEG ESPA

Safety Related

X

Non-Safety Related

Calc No. 2009-11222

Rev. 2 Date

Page A.4-10 of A.4-12

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

ATMOS File Parameter	Description	Category	Value Used	Source	Comment
ISNUMISO	Number of radionuclides defined	Driven by U.S. EPR™ design	58	NUREG/CR-6613 (sample problem minus Co-58 and Co-60)	Fission products for the U.S. EPR™ design (U-235) should be similar for other PWR designs so the number of radionuclides is similar to other PWR MACCS2 runs. [MOX fuel is not considered.]
ISNUCNAM	Names of radionuclides	Driven by U.S. EPR™ design	See Core Inventory Table above	NUREG/CR-6613 (sample problem), does not include Co-58, Co-60 (not included in Table of Nuclides in this document)	Fission products for the U.S. EPR™ design (U-235) should be similar for other PWR designs so the number of radionuclides is similar to other PWR MACCS2 runs. [MOX fuel is not considered.]
ISIGROUP	Radionuclide group to which radio-nuclide is assigned	Modeling parameter	See table in Item 3	Modeler choice	These nine groups are the same as have been defined in the table in item 3
WEBUILDH	Building height	Driven by U.S. EPR™ design	63.30m	U.S. EPR™ – design specific	
SIGYINT	Initial value of σ_y	Driven by U.S. EPR™ design	25.37	U.S. EPR™ – design specific	σ_y = building width/4.3
SIGZINT	Initial value of σ_z	Driven by U.S. EPR™ design	28.98	U.S. EPR™ – design specific	σ_z = building height/2.15
RDATNAM2	Release category name (identifier)	Identifier	See Release Category Table in this document	See Release Category Table in this document	There is a different release category name specified for each release category analyzed

Calc. For ENVIRONMENTAL CONSEQUENCE	
ANALYSIS FOR PSEG ESPA	
Safety Related	X
Non-Safety Related	

Calc. No.	2009-11222
Rev.	2
Date	
Page	A.4-11 of A.4-12

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATMOS File Parameter	Description	Category	Value Used	Source	Comment
RDOALARM	Time after accident initiation that off-site alarm is initiated	Driven by U.S. EPR™ design	See Scenario Information Table	RC-specific MAAP run (at time of core uncover)	The "alarm" time will be a function of the release category; "alarm" plus "warning time to evacuation" equal delay time (PDELAY)
RDNUMREL	Number of plumes released	Driven by U.S. EPR™ design	1	RC-specific MAAP run	The number plumes is obtained from the MAAP output parameter FREL (number and location of releases)
RDMAXRIS	Risk dominant plume	Driven by U.S. EPR™ design	1	n/a	Typical MAAP run will only have a single release point, and therefore only one plume (NUMREL=1). Accordingly, risk-dominant plume is the only plume.
RDPLHEAT	Energy of release	Driven by U.S. EPR™ design	See Scenario Information Table	RC-specific MAAP run	There will be a different heat of release for each RC analyzed
RDPLHTE	Height of release	Driven by U.S. EPR™ design	See Scenario Information Table	RC-specific MAAP run	There will be a different height of release for each RC analyzed
RDPLUDUR	Plume duration	Driven by U.S. EPR™ design	See Scenario Information Table	RC-specific MAAP run	There will be a different plume duration for each RC analyzed
RDPDELAY	Start time of plume release as measured from start of accident	Driven by U.S. EPR™ design	See Scenario Information Table	RC-specific MAAP run	There will be a different delay time for each RC analyzed

Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
Safety Related		Date	
X	Non-Safety Related	Page	A.4-12 of A.4-12

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

ATMOS File Parameter	Description	Category	Value Used	Source	Comment
RDCORINV	Core inventory	Driven by U.S. EPRTM design	See Core Inventory Table (in Bq)	Based on core inventory used in MAAP run (see core inventory table)	Bounding core inventory used for base case
RDCORSCA	Core inventory scaling factor	Modeling parameter	1.	n/a	Core inventory provided in Bq at the 4612 MWt for U.S. EPR TM design. Scaling factor can be used to equate core inventories from different power levels or to convert units (e.g., Curies to Bq)
RDRELFRC	Release fraction	Driven by U.S. EPR TM design	See Table of Release Fractions	RC-specific MAAP run	There will be a different release fraction (per radioisotopic group) for each RC analyzed



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	B-1	of B-3

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT B
WinMACCS Program Files



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	B-2	of B-3

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

WinMACCS directory (C:\Program Files\WinMACCS) listing on Computer ZL4848, with a time stamp:

<u>Time Stamp</u>	<u>File</u>
04/24/1998 12:00 AM	1,078 Bullseye.ico
04/23/1998 04:00 PM	1,078 Cloud.ico
07/17/2007 09:29 AM	532,480 Comida2.exe
09/02/2009 04:18 PM	1,006 COMIDA2Err.log
09/02/2009 04:18 PM	6 COMIDA2Stat.log
08/18/2009 12:59 PM	<DIR> DCF and COMIDA2 Files
09/02/2009 04:16 PM	<DIR> DistributionDescriptions
08/21/2009 02:54 PM	<DIR> Documentation
04/24/1998 12:00 AM	1,078 Erase02.ico
11/30/2001 03:25 AM	1,278 grey_dkgrey_check.bmp
07/19/2006 02:38 PM	1,358 grey_dkgrey_check.ico
12/05/2001 06:17 AM	1,278 grey_dkgrey_stop.bmp
07/19/2006 02:39 PM	1,358 grey_dkgrey_stop.ico
09/14/2004 07:22 AM	1,278 grey_green_check.bmp
07/19/2006 02:35 PM	1,358 grey_green_check.ico
11/30/2001 03:23 AM	1,278 grey_stop.bmp
07/19/2006 02:36 PM	1,358 grey_stop.ico
09/25/1992 02:36 AM	85,800 Indexr.dat
03/10/2008 05:10 PM	3,235,840 Initialize2000.mdb
08/21/2009 02:55 PM	66,445 INSTALL.LOG
01/04/2008 09:03 PM	61,462 legend.bmp
09/02/2009 04:18 PM	96 LHS.ERR
01/30/2002 12:27 PM	588,069 lhs.exe
08/21/2009 02:54 PM	<DIR> MACCS2 Samples
03/07/2008 11:22 AM	1,466,368 maccs2.exe
03/07/2008 11:10 AM	2,130,043 maccs2.exedebug
09/02/2009 04:18 PM	624 MaxStat.log
06/10/2004 03:37 PM	1,278 param.bmp
06/04/2007 03:46 PM	40,960 PopMod.exe
03/20/2008 01:35 PM	15,281 readme.txt
04/02/2002 12:17 PM	1,224 sipra.ini
07/26/2002 04:02 PM	153,088 UNWISE.EXE
01/11/2008 07:52 AM	2,268 winmaccs.cnt
02/20/2008 02:20 PM	1,712,128 WinMaccs.exe
01/11/2008 08:36 AM	10,565,121 Winmaccs.hlp
07/18/2006 04:52 PM	1,278 wt_green_check.bmp
07/18/2006 04:53 PM	1,278 wt_grey_check.bmp
07/18/2006 04:54 PM	1,278 wt_grey_stop.bmp
10/31/2007 02:06 PM	1,278 wt_grey_stop_error.bmp
11/29/2001 04:33 AM	1,278 wt_lightning.bmp
11/30/2007 12:00 PM	1,278 wt_stop.bmp
07/20/2006 02:03 PM	1,278 wt_yield.bmp



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	B-3	of B-3

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

07/20/2006 02:03 PM
 11/29/2007 12:04 PM

1,278 wt_yield_check.bmp
 1,278 wt_yield_error.bmp



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-1	of C-173

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT C
PSEG Site Met Data



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-2	of C-173

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

SL HC MET 2004 - SHCMET04.inp - Orig: G. Tegarden 7/22/08 Verf: M. Saunders 7/24/08
 DAY HR DRSP S PC - Supporting Calc: SLHC-MET.XLS

- 001 01 040326000
- 001 02 040316000
- 001 03 070326000
- 001 04 060336000
- 001 05 060286000
- 001 06 060306000
- 001 07 070297000
- 001 08 080347000
- 001 09 080386000
- 001 10 080514000
- 001 11 070503000
- 001 12 070463000
- 001 13 070413000
- 001 14 070353000
- 001 15 060304000
- 001 16 050264000
- 001 17 050255000
- 001 18 050075000
- 001 19 050115000
- 001 20 010076000
- 001 21 130126000
- 001 22 150237000
- 001 23 150236000
- 001 24 160196000
- 002 01 160276000
- 002 02 140216000
- 002 03 150256000
- 002 04 140356000
- 002 05 150465000
- 002 06 150325000
- 002 07 150245000
- 002 08 150585004
- 002 09 160525000
- 002 10 010295000
- 002 11 160215000
- 002 12 160155000
- 002 13 030204000
- 002 14 040264000
- 002 15 040194000
- 002 16 050174000
- 002 17 040135000
- 002 18 030145000
- 002 19 010086000
- 002 20 150286000
- 002 21 160306000
- 002 22 150166000
- 002 23 150196000
- 002 24 150195000
- 003 01 140205000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-3	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 003 02 150256000
- 003 03 150346000
- 003 04 150456000
- 003 05 150476000
- 003 06 150496000
- 003 07 150436000
- 003 08 150376000
- 003 09 150276000
- 003 10 150286000
- 003 11 160126000
- 003 12 050155000
- 003 13 050244000
- 003 14 050215000
- 003 15 050145000
- 003 16 050075000
- 003 17 160177000
- 003 18 150247000
- 003 19 160217000
- 003 20 140157000
- 003 21 150257000
- 003 22 110257000
- 003 23 130187000
- 003 24 150177000
- 004 01 160217000
- 004 02 160247000
- 004 03 160257000
- 004 04 030097000
- 004 05 100247000
- 004 06 100157000
- 004 07 150127000
- 004 08 150127000
- 004 09 150207000
- 004 10 150227000
- 004 11 130106000
- 004 12 110145000
- 004 13 100255000
- 004 14 100524000
- 004 15 100514000
- 004 16 100544000
- 004 17 100514000
- 004 18 110324000
- 004 19 110244000
- 004 20 100344000
- 004 21 120324000
- 004 22 120174000
- 004 23 130244000
- 004 24 130254000
- 005 01 120374000
- 005 02 120344000
- 005 03 120274000
- 005 04 110294000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-4	of C-173

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by		Date
Reviewed by		Date
Approved by		Date

- 005 05 100304000
- 005 06 110364000
- 005 07 100304000
- 005 08 110294002
- 005 09 100174000
- 005 10 090214001
- 005 11 090124007
- 005 12 080164003
- 005 13 150264002
- 005 14 080284000
- 005 15 090214002
- 005 16 080174002
- 005 17 080224002
- 005 18 080215000
- 005 19 080255000
- 005 20 080245000
- 005 21 080285000
- 005 22 070305000
- 005 23 070375000
- 005 24 070445000
- 006 01 070595000
- 006 02 070665000
- 006 03 070615000
- 006 04 070465000
- 006 05 060295000
- 006 06 060355000
- 006 07 060285000
- 006 08 060325000
- 006 09 060374000
- 006 10 070494000
- 006 11 070643000
- 006 12 060672000
- 006 13 060602000
- 006 14 050623000
- 006 15 050634000
- 006 16 050614000
- 006 17 060714000
- 006 18 060804000
- 006 19 060764000
- 006 20 070754000
- 006 21 070714000
- 006 22 070684000
- 006 23 060644000
- 006 24 060624000
- 007 01 060634000
- 007 02 060624000
- 007 03 060634000
- 007 04 060544000
- 007 05 060704000
- 007 06 060604000
- 007 07 060674000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-5	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

007 08 050664000
 007 09 050694000
 007 10 050763000
 007 11 050813000
 007 12 050762000
 007 13 050742000
 007 14 050763000
 007 15 060663000
 007 16 060684000
 007 17 060654000
 007 18 060604000
 007 19 050664000
 007 20 060554000
 007 21 050544000
 007 22 050604000
 007 23 050434000
 007 24 040364000
 008 01 040394000
 008 02 030444000
 008 03 040414000
 008 04 050454000
 008 05 050444000
 008 06 050444000
 008 07 050474000
 008 08 050414000
 008 09 040524000
 008 10 040614000
 008 11 050562000
 008 12 050533000
 008 13 060483000
 008 14 050474000
 008 15 050394000
 008 16 040374000
 008 17 030324000
 008 18 040314000
 008 19 030344000
 008 20 030274000
 008 21 030254000
 008 22 030214000
 008 23 030304000
 008 24 030314000
 009 01 060154000
 009 02 070224000
 009 03 070174000
 009 04 070264000
 009 05 070304000
 009 06 070294000
 009 07 060254000
 009 08 070284000
 009 09 080284000
 009 10 100424000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-6	of C-173

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

009 11 100493000
 009 12 100622000
 009 13 100552000
 009 14 100463000
 009 15 090464000
 009 16 090424000
 009 17 090374000
 009 18 100335000
 009 19 100395000
 009 20 090424000
 009 21 090454000
 009 22 090474000
 009 23 100464000
 009 24 090504000
 010 01 090474000
 010 02 090494000
 010 03 090564000
 010 04 090484000
 010 05 090514000
 010 06 090564000
 010 07 090504000
 010 08 090534000
 010 09 090634000
 010 10 090584000
 010 11 080552000
 010 12 090492000
 010 13 090492000
 010 14 080492000
 010 15 080483000
 010 16 080454000
 010 17 080384000
 010 18 070405000
 010 19 070405000
 010 20 070395000
 010 21 070375000
 010 22 080395000
 010 23 100255000
 010 24 100225000
 011 01 100305000
 011 02 100255000
 011 03 090225000
 011 04 070295000
 011 05 070295000
 011 06 070265000
 011 07 070195000
 011 08 060214000
 011 09 050244000
 011 10 040303000
 011 11 040353000
 011 12 040342000
 011 13 040323000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-7	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 011 14 030372000
- 011 15 030423000
- 011 16 030474000
- 011 17 030534000
- 011 18 030484000
- 011 19 020424000
- 011 20 020544000
- 011 21 020564000
- 011 22 020574000
- 011 23 020554000
- 011 24 020604000
- 012 01 020574000
- 012 02 020444000
- 012 03 020494000
- 012 04 020424000
- 012 05 030444000
- 012 06 030454000
- 012 07 030394000
- 012 08 030354000
- 012 09 030384000
- 012 10 030364000
- 012 11 030264000
- 012 12 030234000
- 012 13 030174000
- 012 14 040224000
- 012 15 040135000
- 012 16 040105000
- 012 17 050215000
- 012 18 050275000
- 012 19 050255000
- 012 20 050365000
- 012 21 050305000
- 012 22 050265000
- 012 23 060255000
- 012 24 070295000
- 013 01 060255000
- 013 02 060185000
- 013 03 030195000
- 013 04 020186000
- 013 05 020216000
- 013 06 020226000
- 013 07 030295000
- 013 08 030295000
- 013 09 030335000
- 013 10 040424000
- 013 11 050384000
- 013 12 050524001
- 013 13 050594000
- 013 14 060574000
- 013 15 070494000
- 013 16 060464000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-8	of C-173

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

013 17 060485000
 013 18 070665000
 013 19 070635000
 013 20 070605000
 013 21 070705000
 013 22 080605000
 013 23 080784000
 013 24 070704000
 014 01 080574000
 014 02 080475000
 014 03 080485000
 014 04 080435000
 014 05 080405000
 014 06 100195000
 014 07 110245000
 014 08 110215000
 014 09 110254000
 014 10 110294000
 014 11 100353000
 014 12 100313000
 014 13 110184000
 014 14 010174000
 014 15 150204000
 014 16 150204000
 014 17 140244000
 014 18 140264000
 014 19 140434000
 014 20 140484000
 014 21 140514000
 014 22 140384000
 014 23 130304000
 014 24 130254000
 015 01 110274000
 015 02 100354000
 015 03 100454001
 015 04 100524000
 015 05 100664000
 015 06 100714000
 015 07 090684000
 015 08 090644000
 015 09 090634000
 015 10 090573000
 015 11 080513000
 015 12 080522000
 015 13 070632000
 015 14 070652000
 015 15 070764000
 015 16 080574000
 015 17 070474000
 015 18 070474000
 015 19 080644000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-9	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

015 20 080714000
 015 21 080664000
 015 22 070814000
 015 23 070874000
 015 24 070964000
 016 01 070934000
 016 02 070964000
 016 03 060754000
 016 04 060784000
 016 05 060864000
 016 06 060894000
 016 07 060764000
 016 08 060714000
 016 09 060884000
 016 10 060864000
 016 11 060813000
 016 12 070842000
 016 13 060812000
 016 14 070812000
 016 15 070823000
 016 16 070814000
 016 17 070784000
 016 18 060744000
 016 19 060594000
 016 20 060594000
 016 21 060634000
 016 22 070624000
 016 23 070604000
 016 24 070594000
 017 01 070544000
 017 02 070594000
 017 03 070514000
 017 04 070524000
 017 05 070485000
 017 06 070434000
 017 07 070454000
 017 08 070404000
 017 09 070504000
 017 10 080463000
 017 11 070413000
 017 12 070343000
 017 13 070254000
 017 14 060263000
 017 15 050314000
 017 16 050274000
 017 17 040224000
 017 18 040234000
 017 19 040204000
 017 20 030204000
 017 21 040294000
 017 22 030314000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-10	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

017 23 020314001
 017 24 010354000
 018 01 010384001
 018 02 010484000
 018 03 010404002
 018 04 010454001
 018 05 010484000
 018 06 010424000
 018 07 010354000
 018 08 160295001
 018 09 150265002
 018 10 150275005
 018 11 150255007
 018 12 150165004
 018 13 140095002
 018 14 080174001
 018 15 080214002
 018 16 080224000
 018 17 080324001
 018 18 080345000
 018 19 070425000
 018 20 070615000
 018 21 070555000
 018 22 070755000
 018 23 070775000
 018 24 070764000
 019 01 070764000
 019 02 060584000
 019 03 060554000
 019 04 050574000
 019 05 050634000
 019 06 060564000
 019 07 060554000
 019 08 060524000
 019 09 060604000
 019 10 060724000
 019 11 060743000
 019 12 070753000
 019 13 070732000
 019 14 060723000
 019 15 060753000
 019 16 060764000
 019 17 060694000
 019 18 070544000
 019 19 060624000
 019 20 060564000
 019 21 060604000
 019 22 060594000
 019 23 060614000
 019 24 050634000
 020 01 050594000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-11	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 020 02 050554000
- 020 03 050494000
- 020 04 060454000
- 020 05 060464000
- 020 06 060474000
- 020 07 060384000
- 020 08 060384000
- 020 09 060454000
- 020 10 060694000
- 020 11 070793000
- 020 12 070822000
- 020 13 070852000
- 020 14 070862000
- 020 15 070783000
- 020 16 070774000
- 020 17 070704000
- 020 18 070664000
- 020 19 060564000
- 020 20 060514000
- 020 21 060514000
- 020 22 070554000
- 020 23 070554000
- 020 24 070594000
- 021 01 070544000
- 021 02 070544000
- 021 03 070504000
- 021 04 070534000
- 021 05 070474000
- 021 06 070425000
- 021 07 070414000
- 021 08 070444000
- 021 09 070454000
- 021 10 070463000
- 021 11 080463000
- 021 12 070382000
- 021 13 060392000
- 021 14 060422000
- 021 15 060384000
- 021 16 040444000
- 021 17 050374000
- 021 18 050304000
- 021 19 050254000
- 021 20 050225000
- 021 21 030254000
- 021 22 030305000
- 021 23 020285000
- 021 24 020375000
- 022 01 010395000
- 022 02 010465000
- 022 03 020325000
- 022 04 020305000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-12	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

022 05 030324000
 022 06 030334000
 022 07 030344000
 022 08 030334000
 022 09 020424000
 022 10 030374000
 022 11 030314000
 022 12 030424000
 022 13 040375000
 022 14 040334000
 022 15 040344000
 022 16 050514000
 022 17 050475000
 022 18 060605000
 022 19 060605000
 022 20 070705000
 022 21 070734000
 022 22 080724000
 022 23 080714000
 022 24 080754000
 023 01 070794000
 023 02 070724000
 023 03 070604000
 023 04 070634000
 023 05 070544000
 023 06 070524000
 023 07 070514000
 023 08 070394000
 023 09 070634000
 023 10 060763000
 023 11 060732000
 023 12 070791000
 023 13 070691000
 023 14 060751000
 023 15 060672000
 023 16 060633000
 023 17 060514000
 023 18 070354000
 023 19 070235000
 023 20 070255000
 023 21 070274000
 023 22 080304000
 023 23 080344000
 023 24 100284000
 024 01 110164000
 024 02 110124000
 024 03 130084000
 024 04 130084000
 024 05 120124000
 024 06 120114000
 024 07 120094000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-13	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

024 08 120084000
 024 09 100184000
 024 10 100274000
 024 11 090324000
 024 12 080414000
 024 13 080384000
 024 14 070423000
 024 15 070534000
 024 16 070594000
 024 17 070514000
 024 18 070385000
 024 19 070345000
 024 20 060415000
 024 21 070565000
 024 22 070555000
 024 23 080585000
 024 24 080455000
 025 01 080595000
 025 02 080584000
 025 03 080485000
 025 04 070445000
 025 05 070324000
 025 06 070414000
 025 07 070394000
 025 08 080315000
 025 09 070344000
 025 10 080433000
 025 11 080413000
 025 12 090373000
 025 13 100274000
 025 14 080214000
 025 15 060214000
 025 16 060184000
 025 17 070134000
 025 18 080104000
 025 19 100144000
 025 20 120134000
 025 21 120214000
 025 22 120244001
 025 23 110214000
 025 24 120154003
 026 01 120184003
 026 02 110304002
 026 03 110364004
 026 04 110454001
 026 05 110454002
 026 06 100474000
 026 07 110484000
 026 08 110464000
 026 09 110494000
 026 10 110514000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-14	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 026 11 110534000
- 026 12 110614000
- 026 13 110554000
- 026 14 120504000
- 026 15 110434000
- 026 16 110474000
- 026 17 110464000
- 026 18 110464000
- 026 19 110464000
- 026 20 100464000
- 026 21 110424000
- 026 22 110414000
- 026 23 110404000
- 026 24 100434000
- 027 01 100434000
- 027 02 100494000
- 027 03 100474000
- 027 04 110454000
- 027 05 100424000
- 027 06 100434000
- 027 07 100384000
- 027 08 110374000
- 027 09 110434000
- 027 10 100434000
- 027 11 110444000
- 027 12 110394000
- 027 13 100444000
- 027 14 100394000
- 027 15 100364000
- 027 16 110324000
- 027 17 110374000
- 027 18 110424000
- 027 19 110424006
- 027 20 080434006
- 027 21 070654005
- 027 22 080674000
- 027 23 090554000
- 027 24 090394000
- 028 01 070404000
- 028 02 070374000
- 028 03 070444000
- 028 04 060424000
- 028 05 060424000
- 028 06 050414000
- 028 07 050394000
- 028 08 040454000
- 028 09 050524000
- 028 10 050604000
- 028 11 060764000
- 028 12 060764000
- 028 13 060834000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-15	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

028 14 060874000
 028 15 060844000
 028 16 060804000
 028 17 060764000
 028 18 060654000
 028 19 060634000
 028 20 050485000
 028 21 050475000
 028 22 050425000
 028 23 050375000
 028 24 040405000
 029 01 040345000
 029 02 030345000
 029 03 030345000
 029 04 030395000
 029 05 030405000
 029 06 040355000
 029 07 040355000
 029 08 040375000
 029 09 030355000
 029 10 040484000
 029 11 050584000
 029 12 050583000
 029 13 070523000
 029 14 080472000
 029 15 070443000
 029 16 070404000
 029 17 080364000
 029 18 080385000
 029 19 080375000
 029 20 080475000
 029 21 080345000
 029 22 080364000
 029 23 080424000
 029 24 080404000
 030 01 080314000
 030 02 080274000
 030 03 070404000
 030 04 070384000
 030 05 070354000
 030 06 070404000
 030 07 070384000
 030 08 070304000
 030 09 070334000
 030 10 070444000
 030 11 070554000
 030 12 060461000
 030 13 070632000
 030 14 070662000
 030 15 060633000
 030 16 060514000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-16	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

030 17 060544000
 030 18 060434000
 030 19 060424000
 030 20 060684000
 030 21 060574000
 030 22 060634000
 030 23 060564000
 030 24 060574000
 031 01 060514000
 031 02 060514000
 031 03 060464000
 031 04 060534000
 031 05 050564000
 031 06 050524000
 031 07 050544000
 031 08 050624000
 031 09 060664000
 031 10 060724000
 031 11 060673000
 031 12 060663000
 031 13 060642000
 031 14 060633000
 031 15 060673000
 031 16 060644000
 031 17 060634000
 031 18 070534000
 031 19 070495000
 031 20 070475000
 031 21 070525000
 031 22 070535000
 031 23 070504000
 031 24 060424000
 032 01 060425000
 032 02 060434000
 032 03 060375000
 032 04 060455000
 032 05 060445000
 032 06 050435000
 032 07 050425000
 032 08 060425000
 032 09 060384000
 032 10 070384000
 032 11 080443000
 032 12 080493000
 032 13 070393000
 032 14 070363000
 032 15 070353000
 032 16 070384000
 032 17 060324000
 032 18 070355000
 032 19 060385000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-17	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 032 20 060385000
- 032 21 070316000
- 032 22 070296000
- 032 23 080286000
- 032 24 070276000
- 033 01 070286000
- 033 02 070306000
- 033 03 080286000
- 033 04 070245000
- 033 05 090296000
- 033 06 100346000
- 033 07 100347000
- 033 08 110287000
- 033 09 100276000
- 033 10 110304000
- 033 11 110274000
- 033 12 100174000
- 033 13 040244000
- 033 14 020164000
- 033 15 160175000
- 033 16 010135000
- 033 17 150095000
- 033 18 150175000
- 033 19 140226000
- 033 20 140215000
- 033 21 160175000
- 033 22 140215000
- 033 23 140146000
- 033 24 120236000
- 034 01 110236000
- 034 02 110187000
- 034 03 090257000
- 034 04 090266000
- 034 05 100286000
- 034 06 110306000
- 034 07 110336000
- 034 08 110305000
- 034 09 110285000
- 034 10 130234000
- 034 11 120215006
- 034 12 120255007
- 034 13 130445012
- 034 14 140725013
- 034 15 150955004
- 034 16 160716000
- 034 17 040335000
- 034 18 040415000
- 034 19 040445000
- 034 20 040365000
- 034 21 040415000
- 034 22 040425000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-18	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

034 23 040395000
 034 24 040435000
 035 01 050445000
 035 02 050525000
 035 03 050455000
 035 04 050375000
 035 05 050315000
 035 06 040305000
 035 07 060245000
 035 08 050155000
 035 09 040305000
 035 10 050314000
 035 11 070624000
 035 12 070674000
 035 13 070633000
 035 14 070613000
 035 15 070593000
 035 16 070554000
 035 17 070454000
 035 18 070385000
 035 19 070245000
 035 20 060315000
 035 21 060255000
 035 22 060365000
 035 23 060425000
 035 24 070355000
 036 01 070285000
 036 02 080305000
 036 03 080215000
 036 04 070205000
 036 05 070135000
 036 06 070185000
 036 07 070205000
 036 08 080165000
 036 09 100324000
 036 10 100414000
 036 11 100404000
 036 12 090284000
 036 13 090264000
 036 14 080234000
 036 15 080204000
 036 16 080164000
 036 17 100114000
 036 18 130104000
 036 19 110175000
 036 20 120175000
 036 21 120175000
 036 22 120224000
 036 23 120134000
 036 24 130155001
 037 01 120235001



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-19	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 037 02 150194000
- 037 03 130224001
- 037 04 130214003
- 037 05 130264005
- 037 06 120255004
- 037 07 120275000
- 037 08 120355000
- 037 09 120265002
- 037 10 130255000
- 037 11 160545002
- 037 12 070355012
- 037 13 100385007
- 037 14 140286016
- 037 15 160176025
- 037 16 040076015
- 037 17 150105014
- 037 18 150125011
- 037 19 090105023
- 037 20 140186013
- 037 21 160356004
- 037 22 070295001
- 037 23 090105003
- 037 24 060145000
- 038 01 070265000
- 038 02 080276000
- 038 03 060195001
- 038 04 060205000
- 038 05 060185000
- 038 06 060425000
- 038 07 050405000
- 038 08 060255000
- 038 09 050225000
- 038 10 060244000
- 038 11 060414000
- 038 12 060504000
- 038 13 060604000
- 038 14 070584000
- 038 15 070654000
- 038 16 060634000
- 038 17 060634000
- 038 18 060545000
- 038 19 050455000
- 038 20 050515000
- 038 21 060554000
- 038 22 070564000
- 038 23 070634000
- 038 24 070595000
- 039 01 070545000
- 039 02 070555000
- 039 03 070565000
- 039 04 070604000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-20	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

039 05 070634000
 039 06 070624000
 039 07 070594000
 039 08 070674000
 039 09 070694000
 039 10 070683000
 039 11 070662000
 039 12 070601000
 039 13 070611000
 039 14 070591000
 039 15 060512000
 039 16 060433000
 039 17 060434000
 039 18 050344000
 039 19 050295000
 039 20 040285000
 039 21 020325000
 039 22 010395000
 039 23 010385000
 039 24 010305000
 040 01 020285000
 040 02 020305000
 040 03 010355000
 040 04 010424000
 040 05 020515000
 040 06 010535000
 040 07 020564000
 040 08 020564000
 040 09 020614000
 040 10 020544000
 040 11 020484000
 040 12 030694000
 040 13 030595000
 040 14 020585000
 040 15 030565000
 040 16 020485000
 040 17 030375000
 040 18 020295000
 040 19 010296000
 040 20 010186000
 040 21 160326000
 040 22 160366000
 040 23 020296000
 040 24 030285000
 041 01 030255000
 041 02 030225000
 041 03 040215000
 041 04 040305000
 041 05 030236000
 041 06 040255000
 041 07 050215000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-21	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

041 08 060136000
 041 09 040196000
 041 10 050145000
 041 11 040265000
 041 12 040314000
 041 13 040373000
 041 14 050394000
 041 15 050334000
 041 16 060435000
 041 17 050234000
 041 18 030205000
 041 19 010136000
 041 20 160166000
 041 21 150177000
 041 22 030186000
 041 23 050225000
 041 24 060256000
 042 01 060355000
 042 02 050285000
 042 03 060255000
 042 04 060265000
 042 05 060385000
 042 06 070375000
 042 07 080455000
 042 08 080405000
 042 09 070514000
 042 10 070603000
 042 11 070622000
 042 12 070661000
 042 13 070561000
 042 14 070531000
 042 15 070512000
 042 16 060494000
 042 17 060394000
 042 18 070315000
 042 19 070265000
 042 20 060115000
 042 21 080105000
 042 22 110065000
 042 23 150096000
 042 24 140075000
 043 01 140126000
 043 02 010095000
 043 03 030125000
 043 04 050155000
 043 05 040215000
 043 06 040175000
 043 07 030095000
 043 08 020055000
 043 09 110055000
 043 10 120045000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-22	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

043 11 160104000
 043 12 160244000
 043 13 150244000
 043 14 150244000
 043 15 150335000
 043 16 150335000
 043 17 150275000
 043 18 150286000
 043 19 150346000
 043 20 160266000
 043 21 010225000
 043 22 020305000
 043 23 020355000
 043 24 030305000
 044 01 030255000
 044 02 030305000
 044 03 040345000
 044 04 040345000
 044 05 040255000
 044 06 050215000
 044 07 050325000
 044 08 060335000
 044 09 070424000
 044 10 070553000
 044 11 060502000
 044 12 060501000
 044 13 050511000
 044 14 050562000
 044 15 050562000
 044 16 050544000
 044 17 050514000
 044 18 040305000
 044 19 040285000
 044 20 040305000
 044 21 030296000
 044 22 020236000
 044 23 030236000
 044 24 030286000
 045 01 030276000
 045 02 030246000
 045 03 030256000
 045 04 040306000
 045 05 040326000
 045 06 030316000
 045 07 030285000
 045 08 040346000
 045 09 050395000
 045 10 040425000
 045 11 060594000
 045 12 060623000
 045 13 060563000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-23	of C-173

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

045 14 060614000
045 15 060454000
045 16 060424000
045 17 050375000
045 18 060315000
045 19 050175000
045 20 040125000
045 21 060055000
045 22 100065000
045 23 110207000
045 24 090306000
046 01 100196000
046 02 100306000
046 03 100255000
046 04 080225000
046 05 080225000
046 06 080255000
046 07 080326000
046 08 090295000
046 09 100594000
046 10 100663000
046 11 100642000
046 12 100551000
046 13 090531000
046 14 080471000
046 15 100432000
046 16 100423000
046 17 110434000
046 18 110375000
046 19 110305000
046 20 100365000
046 21 100355000
046 22 100335000
046 23 100335000
046 24 100425000
047 01 100515000
047 02 100475000
047 03 100425000
047 04 100345000
047 05 100245000
047 06 090315000
047 07 090325000
047 08 090434000
047 09 100574000
047 10 100462000
047 11 090422000
047 12 080382000
047 13 080441000
047 14 080431000
047 15 080382000
047 16 080283000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-24	of C-173

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

047 17 080244000
 047 18 090104000
 047 19 110164000
 047 20 070165000
 047 21 070265000
 047 22 090195000
 047 23 120095000
 047 24 130105000
 048 01 120166000
 048 02 130126000
 048 03 100137000
 048 04 110217000
 048 05 120177000
 048 06 110217000
 048 07 110236000
 048 08 110206000
 048 09 110255000
 048 10 120314000
 048 11 130322000
 048 12 130312000
 048 13 160214000
 048 14 160174000
 048 15 130243000
 048 16 140114000
 048 17 110134000
 048 18 090145000
 048 19 120195000
 048 20 130224000
 048 21 120224000
 048 22 110294000
 048 23 110314000
 048 24 100334000
 049 01 100354000
 049 02 100344000
 049 03 100354000
 049 04 100294000
 049 05 090344000
 049 06 090355000
 049 07 090365000
 049 08 090455000
 049 09 090604000
 049 10 090613000
 049 11 090602000
 049 12 080571000
 049 13 080571000
 049 14 080551000
 049 15 080592000
 049 16 070673000
 049 17 070604000
 049 18 070595000
 049 19 070555000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-25	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 049 20 070535000
- 049 21 070395000
- 049 22 060405000
- 049 23 060325000
- 049 24 060385000
- 050 01 060315000
- 050 02 050175000
- 050 03 060245000
- 050 04 050225000
- 050 05 040305000
- 050 06 040325000
- 050 07 040305000
- 050 08 040365000
- 050 09 040415000
- 050 10 050374000
- 050 11 050493000
- 050 12 050531000
- 050 13 060551000
- 050 14 070602000
- 050 15 070632000
- 050 16 070594000
- 050 17 070524000
- 050 18 080355000
- 050 19 080276000
- 050 20 080326000
- 050 21 090306000
- 050 22 090216000
- 050 23 110317000
- 050 24 160167000
- 051 01 010166000
- 051 02 120117000
- 051 03 140166000
- 051 04 140196000
- 051 05 110206000
- 051 06 140175000
- 051 07 130155000
- 051 08 130085000
- 051 09 140175000
- 051 10 140304000
- 051 11 150234000
- 051 12 160285000
- 051 13 150504000
- 051 14 150623000
- 051 15 150595000
- 051 16 150594000
- 051 17 140614000
- 051 18 140575000
- 051 19 140465000
- 051 20 140365000
- 051 21 140305000
- 051 22 120175000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
	Safety Related	X Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-26	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 051 23 100256000
- 051 24 110206000
- 052 01 090217000
- 052 02 090257000
- 052 03 100227000
- 052 04 100217000
- 052 05 090197000
- 052 06 100217000
- 052 07 090237000
- 052 08 070197000
- 052 09 070256000
- 052 10 060235000
- 052 11 070424000
- 052 12 070602000
- 052 13 060933000
- 052 14 050864000
- 052 15 050794000
- 052 16 060894000
- 052 17 060804000
- 052 18 060854000
- 052 19 060704000
- 052 20 060724000
- 052 21 060694000
- 052 22 060664000
- 052 23 060634000
- 052 24 060634000
- 053 01 060654000
- 053 02 070645000
- 053 03 060544000
- 053 04 060464000
- 053 05 060584000
- 053 06 070634000
- 053 07 070465000
- 053 08 060394000
- 053 09 060474000
- 053 10 070633000
- 053 11 070642000
- 053 12 070701000
- 053 13 070701000
- 053 14 070671000
- 053 15 070672000
- 053 16 070633000
- 053 17 070564000
- 053 18 070445000
- 053 19 070395000
- 053 20 060365000
- 053 21 060315000
- 053 22 060315000
- 053 23 060365000
- 053 24 060465000
- 054 01 070345000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-27	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 054 02 070325000
- 054 03 070306000
- 054 04 080286000
- 054 05 080265000
- 054 06 080285000
- 054 07 080285000
- 054 08 070235000
- 054 09 080324000
- 054 10 080373000
- 054 11 080353000
- 054 12 080283000
- 054 13 050282000
- 054 14 040223000
- 054 15 020184000
- 054 16 020154000
- 054 17 030254000
- 054 18 040255000
- 054 19 010155000
- 054 20 160165000
- 054 21 160175000
- 054 22 140116000
- 054 23 150186000
- 054 24 150186000
- 055 01 140236000
- 055 02 150215000
- 055 03 160175000
- 055 04 150115000
- 055 05 120166000
- 055 06 130166000
- 055 07 130096000
- 055 08 120076000
- 055 09 070065000
- 055 10 160175000
- 055 11 130164000
- 055 12 130154000
- 055 13 160164000
- 055 14 160144000
- 055 15 080154000
- 055 16 090244000
- 055 17 090314000
- 055 18 100354001
- 055 19 100344000
- 055 20 100344000
- 055 21 090324000
- 055 22 090285000
- 055 23 080345000
- 055 24 080435000
- 056 01 080505000
- 056 02 080635000
- 056 03 080695000
- 056 04 090735000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-28	of C-173

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

056 05 090695000
 056 06 090515000
 056 07 080545000
 056 08 080444000
 056 09 080554000
 056 10 080582000
 056 11 080621000
 056 12 080661000
 056 13 080641000
 056 14 090651000
 056 15 090622000
 056 16 090593000
 056 17 090484000
 056 18 090445000
 056 19 090385000
 056 20 090335000
 056 21 090296000
 056 22 090355000
 056 23 090345000
 056 24 090295000
 057 01 090305000
 057 02 090325000
 057 03 090305000
 057 04 090345000
 057 05 100336000
 057 06 100345000
 057 07 100315000
 057 08 100335000
 057 09 100474000
 057 10 110383000
 057 11 100303000
 057 12 100293000
 057 13 100254000
 057 14 080323000
 057 15 080214000
 057 16 100134000
 057 17 090124000
 057 18 070134000
 057 19 080245000
 057 20 080225000
 057 21 080285000
 057 22 080256000
 057 23 090206000
 057 24 110276000
 058 01 100325000
 058 02 100315000
 058 03 100385000
 058 04 100455000
 058 05 100425000
 058 06 100385000
 058 07 100495000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-29	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

058 08 100464000
 058 09 110524000
 058 10 110612000
 058 11 110611000
 058 12 100571000
 058 13 100541000
 058 14 100511000
 058 15 100562000
 058 16 100503000
 058 17 100344000
 058 18 090155000
 058 19 080235000
 058 20 070236000
 058 21 080346000
 058 22 090346000
 058 23 090316000
 058 24 080326000
 059 01 090326000
 059 02 090336000
 059 03 080325000
 059 04 080315000
 059 05 080335000
 059 06 080286000
 059 07 080266000
 059 08 080255000
 059 09 080364000
 059 10 080373000
 059 11 080362000
 059 12 080332000
 059 13 060252000
 059 14 050302000
 059 15 060402000
 059 16 070383000
 059 17 050344000
 059 18 050255000
 059 19 060256000
 059 20 050305000
 059 21 050216000
 059 22 050166000
 059 23 050087000
 059 24 050177000
 060 01 060207000
 060 02 050347000
 060 03 050317000
 060 04 040127000
 060 05 060157000
 060 06 070127000
 060 07 050177000
 060 08 040177000
 060 09 040136000
 060 10 040185000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-30	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 060 11 040304000
- 060 12 050422000
- 060 13 050451000
- 060 14 050422000
- 060 15 050433000
- 060 16 040374000
- 060 17 040325000
- 060 18 050305000
- 060 19 040336000
- 060 20 050266000
- 060 21 040307000
- 060 22 040267000
- 060 23 030207000
- 060 24 030117000
- 061 01 050077000
- 061 02 040117000
- 061 03 050127000
- 061 04 140057000
- 061 05 130077000
- 061 06 160107000
- 061 07 160137000
- 061 08 010097000
- 061 09 160167000
- 061 10 150235000
- 061 11 160265000
- 061 12 150276000
- 061 13 150365000
- 061 14 150345000
- 061 15 150406000
- 061 16 150456000
- 061 17 150397000
- 061 18 150297000
- 061 19 160237000
- 061 20 150287000
- 061 21 150306000
- 061 22 150427000
- 061 23 150307000
- 061 24 150367000
- 062 01 150347000
- 062 02 150457000
- 062 03 150427000
- 062 04 160397000
- 062 05 030516000
- 062 06 030326000
- 062 07 020366003
- 062 08 020536002
- 062 09 020476000
- 062 10 020435000
- 062 11 030475000
- 062 12 030465000
- 062 13 030396000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-31	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

062 14 040345000
 062 15 030426000
 062 16 030396000
 062 17 030456000
 062 18 040386000
 062 19 040426000
 062 20 050326000
 062 21 060256000
 062 22 070366000
 062 23 080406000
 062 24 080356000
 063 01 080445000
 063 02 080435000
 063 03 080395000
 063 04 070305000
 063 05 050315000
 063 06 050185000
 063 07 050395000
 063 08 050336000
 063 09 050354000
 063 10 050352000
 063 11 060342000
 063 12 070411000
 063 13 070541000
 063 14 070461000
 063 15 070363000
 063 16 060343000
 063 17 090284000
 063 18 080186000
 063 19 090186000
 063 20 090126000
 063 21 100175000
 063 22 150216000
 063 23 150247000
 063 24 150257000
 064 01 150227000
 064 02 140197000
 064 03 150246000
 064 04 150276000
 064 05 150287000
 064 06 140296000
 064 07 110195000
 064 08 100215000
 064 09 110244000
 064 10 110224000
 064 11 100214000
 064 12 100294000
 064 13 090313000
 064 14 080314000
 064 15 080244000
 064 16 090284000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-32 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

064 17 100274000
 064 18 110234000
 064 19 130145000
 064 20 130185000
 064 21 120274000
 064 22 140215000
 064 23 150256000
 064 24 160256000
 065 01 160285000
 065 02 160405000
 065 03 140215000
 065 04 130115000
 065 05 120145000
 065 06 130174000
 065 07 140264000
 065 08 150345000
 065 09 160345000
 065 10 160355000
 065 11 150255000
 065 12 160275000
 065 13 150225000
 065 14 010124000
 065 15 010134000
 065 16 030165000
 065 17 150216000
 065 18 150277000
 065 19 160407000
 065 20 150487000
 065 21 150357000
 065 22 020626000
 065 23 030756000
 065 24 030736000
 066 01 040476000
 066 02 040406000
 066 03 040335004
 066 04 060345002
 066 05 070155016
 066 06 010175021
 066 07 160346031
 066 08 160547009
 066 09 160527002
 066 10 150637003
 066 11 150807000
 066 12 020607000
 066 13 040505040
 066 14 040515000
 066 15 040395000
 066 16 050554000
 066 17 070805000
 066 18 050625000
 066 19 050705000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-33 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

066 20 060715000
 066 21 070675000
 066 22 070675000
 066 23 070595000
 066 24 070535000
 067 01 070525000
 067 02 070425000
 067 03 070315000
 067 04 070355000
 067 05 070485000
 067 06 070345000
 067 07 050215000
 067 08 050185000
 067 09 060274000
 067 10 070343000
 067 11 050263000
 067 12 010223000
 067 13 010184000
 067 14 160344000
 067 15 150515000
 067 16 150635000
 067 17 150674000
 067 18 150564000
 067 19 150515000
 067 20 150555000
 067 21 010615001
 067 22 070554004
 067 23 090494000
 067 24 080265000
 068 01 080265000
 068 02 070354000
 068 03 060504000
 068 04 060574000
 068 05 060514000
 068 06 060464000
 068 07 060494000
 068 08 060514000
 068 09 070634000
 068 10 070743000
 068 11 070672000
 068 12 070664000
 068 13 070573000
 068 14 070534000
 068 15 070634000
 068 16 070474000
 068 17 100445001
 068 18 100335001
 068 19 120135000
 068 20 120155000
 068 21 080335000
 068 22 080435000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-34	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

068 23 090215000
 068 24 070434000
 069 01 070374000
 069 02 070344000
 069 03 070284000
 069 04 070314000
 069 05 080324000
 069 06 100174000
 069 07 160054000
 069 08 080144000
 069 09 070254000
 069 10 060224000
 069 11 060214000
 069 12 010204000
 069 13 010203000
 069 14 010194000
 069 15 010242000
 069 16 030214000
 069 17 080154000
 069 18 110164000
 069 19 110185000
 069 20 110285000
 069 21 120225000
 069 22 120185000
 069 23 130185000
 069 24 110255000
 070 01 110285000
 070 02 110335000
 070 03 110345000
 070 04 110344000
 070 05 110384000
 070 06 110454000
 070 07 110414000
 070 08 110384000
 070 09 110494000
 070 10 110614000
 070 11 110644000
 070 12 110713000
 070 13 110693000
 070 14 110703000
 070 15 110672000
 070 16 100713000
 070 17 100704000
 070 18 100604000
 070 19 100485000
 070 20 090385000
 070 21 090475000
 070 22 090415000
 070 23 090425000
 070 24 090445000
 071 01 080465000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-35	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

071 02 080465000
 071 03 080525000
 071 04 090595000
 071 05 080495000
 071 06 080465000
 071 07 080445000
 071 08 070434000
 071 09 080513000
 071 10 080542000
 071 11 090402000
 071 12 070331000
 071 13 050421000
 071 14 050382000
 071 15 040372000
 071 16 040353000
 071 17 040344000
 071 18 030275000
 071 19 020315000
 071 20 020325000
 071 21 010335000
 071 22 160335000
 071 23 160365000
 071 24 160315000
 072 01 050215000
 072 02 030225000
 072 03 020186000
 072 04 030296000
 072 05 030346000
 072 06 050515000
 072 07 060445000
 072 08 060904000
 072 09 060884000
 072 10 060872000
 072 11 060761000
 072 12 060721000
 072 13 050721000
 072 14 050681000
 072 15 050651000
 072 16 050682000
 072 17 050674000
 072 18 060554000
 072 19 060484000
 072 20 060355000
 072 21 080465000
 072 22 080645000
 072 23 080595000
 072 24 070584000
 073 01 070674000
 073 02 070704000
 073 03 060574000
 073 04 070554000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-36	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

073 05 060484000
 073 06 070584000
 073 07 070574000
 073 08 070664000
 073 09 070704000
 073 10 070781000
 073 11 070661000
 073 12 070661000
 073 13 070701000
 073 14 070671000
 073 15 070661000
 073 16 070672000
 073 17 070614000
 073 18 070504000
 073 19 070385000
 073 20 060355000
 073 21 060305000
 073 22 060385000
 073 23 070335000
 073 24 080266000
 074 01 100206000
 074 02 100316000
 074 03 110246000
 074 04 100216000
 074 05 120276000
 074 06 120195000
 074 07 130156000
 074 08 130185000
 074 09 140254000
 074 10 150422000
 074 11 150522000
 074 12 150621000
 074 13 150692000
 074 14 150793000
 074 15 150802000
 074 16 150823000
 074 17 150804000
 074 18 150744000
 074 19 150694000
 074 20 150655000
 074 21 150665000
 074 22 160634000
 074 23 160625000
 074 24 160515000
 075 01 010265000
 075 02 020106000
 075 03 050335000
 075 04 040325000
 075 05 040306000
 075 06 040315000
 075 07 030305000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-37 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

075 08 040295000
 075 09 050184000
 075 10 040283000
 075 11 050492000
 075 12 050501000
 075 13 050511000
 075 14 050541000
 075 15 040491000
 075 16 050463000
 075 17 050374000
 075 18 050305000
 075 19 040266000
 075 20 050115000
 075 21 070176000
 075 22 110177000
 075 23 130147000
 075 24 140126000
 076 01 110196000
 076 02 110346000
 076 03 110385000
 076 04 100345000
 076 05 100365000
 076 06 110424000
 076 07 110625002
 076 08 110584007
 076 09 120574003
 076 10 120524004
 076 11 120554001
 076 12 110584009
 076 13 110634003
 076 14 110594008
 076 15 110464015
 076 16 100494014
 076 17 110644002
 076 18 110544000
 076 19 110434000
 076 20 090414001
 076 21 100424000
 076 22 110404000
 076 23 110364000
 076 24 110374000
 077 01 100254000
 077 02 090204000
 077 03 100294000
 077 04 100294000
 077 05 100244000
 077 06 100184000
 077 07 100254000
 077 08 110294000
 077 09 110254000
 077 10 110194000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-38	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 077 11 120084000
- 077 12 010124000
- 077 13 030134000
- 077 14 080194000
- 077 15 090164000
- 077 16 110204000
- 077 17 110214000
- 077 18 120184000
- 077 19 120154000
- 077 20 120174000
- 077 21 120134000
- 077 22 130134001
- 077 23 120124000
- 077 24 140154000
- 078 01 130134001
- 078 02 130145000
- 078 03 120125000
- 078 04 030174000
- 078 05 100095000
- 078 06 060094000
- 078 07 040274000
- 078 08 050284000
- 078 09 050234000
- 078 10 040302000
- 078 11 040233000
- 078 12 030252000
- 078 13 040331000
- 078 14 010303000
- 078 15 160423000
- 078 16 150462000
- 078 17 150584000
- 078 18 150584000
- 078 19 150584000
- 078 20 150514000
- 078 21 150464000
- 078 22 130274000
- 078 23 120304000
- 078 24 120314003
- 079 01 130344010
- 079 02 120254014
- 079 03 130304001
- 079 04 110334002
- 079 05 100464001
- 079 06 100514003
- 079 07 100515004
- 079 08 100645001
- 079 09 090594000
- 079 10 090564000
- 079 11 090564000
- 079 12 090614000
- 079 13 090583000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-39	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

079 14 090562000
 079 15 090463000
 079 16 080394000
 079 17 080344000
 079 18 080324000
 079 19 070385000
 079 20 080265000
 079 21 090245000
 079 22 110185000
 079 23 110205000
 079 24 100245000
 080 01 090215000
 080 02 100215000
 080 03 110175000
 080 04 110155000
 080 05 120066000
 080 06 150115000
 080 07 150165000
 080 08 010254000
 080 09 010414000
 080 10 010483000
 080 11 020553000
 080 12 010613000
 080 13 010664000
 080 14 010804000
 080 15 010844000
 080 16 010834000
 080 17 020784000
 080 18 010615000
 080 19 010525000
 080 20 160595000
 080 21 150645000
 080 22 160576000
 080 23 010625000
 080 24 030775000
 081 01 030595000
 081 02 040425000
 081 03 050415000
 081 04 060335000
 081 05 060295000
 081 06 070145000
 081 07 080305000
 081 08 070585000
 081 09 070734000
 081 10 060994000
 081 11 070852000
 081 12 070782000
 081 13 070841000
 081 14 070851000
 081 15 060791000
 081 16 070864000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-40	of C-173

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

- 081 17 070814000
- 081 18 070804000
- 081 19 070774000
- 081 20 070724000
- 081 21 070774000
- 081 22 070744000
- 081 23 070744000
- 081 24 070684000
- 082 01 070594000
- 082 02 070594000
- 082 03 070574000
- 082 04 070494000
- 082 05 070504000
- 082 06 070484000
- 082 07 070514000
- 082 08 080734000
- 082 09 080753000
- 082 10 080721000
- 082 11 080661000
- 082 12 080581000
- 082 13 070531000
- 082 14 080551000
- 082 15 070561000
- 082 16 070592000
- 082 17 070583000
- 082 18 070514000
- 082 19 070385000
- 082 20 070305000
- 082 21 070275000
- 082 22 070315000
- 082 23 060375000
- 082 24 060375000
- 083 01 060375000
- 083 02 070355000
- 083 03 070295000
- 083 04 070315000
- 083 05 070265000
- 083 06 060105000
- 083 07 050154000
- 083 08 040254000
- 083 09 030303000
- 083 10 040381000
- 083 11 040431000
- 083 12 040491000
- 083 13 040521000
- 083 14 040551000
- 083 15 030571000
- 083 16 030632000
- 083 17 030554000
- 083 18 030544000
- 083 19 020524000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-41	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 083 20 020534000
- 083 21 020564000
- 083 22 020504000
- 083 23 020464000
- 083 24 030314000
- 084 01 030295000
- 084 02 030255000
- 084 03 030345000
- 084 04 040345000
- 084 05 040235000
- 084 06 040145000
- 084 07 030235000
- 084 08 030175000
- 084 09 160214000
- 084 10 010155000
- 084 11 160326000
- 084 12 150466000
- 084 13 150555000
- 084 14 150635000
- 084 15 150665000
- 084 16 150676000
- 084 17 150635000
- 084 18 150405000
- 084 19 150336000
- 084 20 160356000
- 084 21 160525000
- 084 22 160445000
- 084 23 160305000
- 084 24 130195000
- 085 01 140306002
- 085 02 150505001
- 085 03 160675001
- 085 04 160615000
- 085 05 160615000
- 085 06 160555000
- 085 07 160525000
- 085 08 160465000
- 085 09 150395000
- 085 10 150335000
- 085 11 150375000
- 085 12 150304000
- 085 13 150284000
- 085 14 150205000
- 085 15 160226000
- 085 16 160427000
- 085 17 160247000
- 085 18 160267000
- 085 19 150226000
- 085 20 140186000
- 085 21 140207000
- 085 22 150266000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-42	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

085 23 150387000
 085 24 150306000
 086 01 140276000
 086 02 150256000
 086 03 150205000
 086 04 150236000
 086 05 150246000
 086 06 150316000
 086 07 150256000
 086 08 150316000
 086 09 150305000
 086 10 160176000
 086 11 150245000
 086 12 150356000
 086 13 150385000
 086 14 150505000
 086 15 150637000
 086 16 150557000
 086 17 150467000
 086 18 150437000
 086 19 150427000
 086 20 150407000
 086 21 140417000
 086 22 150477000
 086 23 150567000
 086 24 150507000
 087 01 150437000
 087 02 150437000
 087 03 150397000
 087 04 150327000
 087 05 110146000
 087 06 100096000
 087 07 010116000
 087 08 020156000
 087 09 060205000
 087 10 040175003
 087 11 020146000
 087 12 030255000
 087 13 050404000
 087 14 060384000
 087 15 060304000
 087 16 060254000
 087 17 060234000
 087 18 050245000
 087 19 060245000
 087 20 090306000
 087 21 090316000
 087 22 090306000
 087 23 090305000
 087 24 090346000
 088 01 090385000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-43	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

088 02 110465000
 088 03 110524000
 088 04 100295000
 088 05 110305000
 088 06 100185000
 088 07 110115000
 088 08 110314000
 088 09 110424000
 088 10 110552000
 088 11 110533000
 088 12 100492000
 088 13 100461000
 088 14 110432000
 088 15 120354000
 088 16 160375000
 088 17 160405000
 088 18 150385000
 088 19 120345000
 088 20 130315000
 088 21 120335000
 088 22 120415000
 088 23 120334000
 088 24 120244000
 089 01 120254000
 089 02 120324000
 089 03 110354000
 089 04 110354000
 089 05 120255000
 089 06 120275000
 089 07 120294000
 089 08 120314000
 089 09 120224000
 089 10 120304000
 089 11 120273000
 089 12 130272000
 089 13 140282000
 089 14 030331000
 089 15 160441000
 089 16 160592000
 089 17 010633000
 089 18 010674000
 089 19 150425000
 089 20 140335000
 089 21 140225000
 089 22 140245000
 089 23 130165000
 089 24 120145000
 090 01 120205000
 090 02 120195000
 090 03 120204000
 090 04 130224000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-44	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

090 05 120354000
 090 06 110354000
 090 07 110364000
 090 08 110424000
 090 09 110464000
 090 10 120483000
 090 11 120413000
 090 12 120253000
 090 13 120283000
 090 14 120273000
 090 15 120264000
 090 16 120244000
 090 17 110284000
 090 18 110344001
 090 19 120274000
 090 20 120304003
 090 21 110304002
 090 22 100284009
 090 23 100224003
 090 24 090264011
 091 01 100304008
 091 02 100384000
 091 03 100464000
 091 04 100464001
 091 05 100314000
 091 06 100284000
 091 07 110214000
 091 08 100194000
 091 09 110234000
 091 10 100284000
 091 11 100294000
 091 12 100294000
 091 13 110304000
 091 14 120214000
 091 15 100174000
 091 16 110234000
 091 17 110224000
 091 18 110214000
 091 19 100244000
 091 20 110284000
 091 21 110184000
 091 22 120114000
 091 23 110204000
 091 24 110314000
 092 01 110314000
 092 02 110174005
 092 03 110314002
 092 04 110474003
 092 05 120474000
 092 06 120384000
 092 07 120414004



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-45	of C-173

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by		Date
Reviewed by		Date
Approved by		Date

- 092 08 120384000
- 092 09 130534000
- 092 10 140744001
- 092 11 150702000
- 092 12 150664000
- 092 13 150564000
- 092 14 150564000
- 092 15 160634000
- 092 16 160893000
- 092 17 150864000
- 092 18 150564000
- 092 19 140394000
- 092 20 140344000
- 092 21 140294000
- 092 22 130274000
- 092 23 130244000
- 092 24 130234000
- 093 01 120304000
- 093 02 120254000
- 093 03 130244000
- 093 04 120314000
- 093 05 120284000
- 093 06 120294000
- 093 07 120394000
- 093 08 120314001
- 093 09 130214007
- 093 10 120264004
- 093 11 120254005
- 093 12 120304003
- 093 13 110314001
- 093 14 120354000
- 093 15 120354000
- 093 16 120354000
- 093 17 120394000
- 093 18 120454000
- 093 19 110384000
- 093 20 110324000
- 093 21 110304001
- 093 22 110274001
- 093 23 110264002
- 093 24 110254000
- 094 01 110214000
- 094 02 110204000
- 094 03 110264001
- 094 04 110244006
- 094 05 110144006
- 094 06 110144001
- 094 07 110164000
- 094 08 090124000
- 094 09 090124000
- 094 10 080094000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-46	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 094 11 060204000
- 094 12 050234000
- 094 13 060274000
- 094 14 060254000
- 094 15 070294000
- 094 16 060304000
- 094 17 060404000
- 094 18 050274000
- 094 19 040224000
- 094 20 030204000
- 094 21 020165000
- 094 22 010215000
- 094 23 030215000
- 094 24 030225000
- 095 01 020316000
- 095 02 010385000
- 095 03 010445000
- 095 04 030254000
- 095 05 030185000
- 095 06 050195000
- 095 07 050594000
- 095 08 050504007
- 095 09 060394001
- 095 10 060614001
- 095 11 050694007
- 095 12 050734011
- 095 13 060714001
- 095 14 060784000
- 095 15 060894000
- 095 16 060984000
- 095 17 060874000
- 095 18 060854000
- 095 19 070854000
- 095 20 070954000
- 095 21 070934000
- 095 22 070744000
- 095 23 070604000
- 095 24 080634000
- 096 01 080704000
- 096 02 080624000
- 096 03 070654000
- 096 04 070684000
- 096 05 070804000
- 096 06 070804000
- 096 07 070764000
- 096 08 070764000
- 096 09 070804000
- 096 10 070882000
- 096 11 070921000
- 096 12 070871000
- 096 13 070941000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-47	of C-173

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

- 096 14 070901000
- 096 15 070871000
- 096 16 070941000
- 096 17 070912000
- 096 18 070824000
- 096 19 070884000
- 096 20 070774000
- 096 21 070645000
- 096 22 070525000
- 096 23 070485000
- 096 24 070725000
- 097 01 070605000
- 097 02 070625000
- 097 03 070634000
- 097 04 070634000
- 097 05 060614000
- 097 06 060564000
- 097 07 060604000
- 097 08 060554000
- 097 09 060654000
- 097 10 070662000
- 097 11 070671000
- 097 12 060681000
- 097 13 070661000
- 097 14 060651000
- 097 15 060661000
- 097 16 060601000
- 097 17 060532000
- 097 18 070514000
- 097 19 070264000
- 097 20 060195000
- 097 21 040225000
- 097 22 040236000
- 097 23 050226000
- 097 24 050206000
- 098 01 040216000
- 098 02 030196000
- 098 03 020176000
- 098 04 020196000
- 098 05 020186000
- 098 06 020266000
- 098 07 010236000
- 098 08 010216000
- 098 09 160226000
- 098 10 040395000
- 098 11 040574000
- 098 12 040534000
- 098 13 050461000
- 098 14 050481000
- 098 15 050611000
- 098 16 050581000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-48	of C-173

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

- 098 17 050533000
- 098 18 060424000
- 098 19 070305000
- 098 20 080256000
- 098 21 070316000
- 098 22 080376000
- 098 23 100385000
- 098 24 090305000
- 099 01 100216000
- 099 02 100255000
- 099 03 100285000
- 099 04 110275000
- 099 05 110245000
- 099 06 100235000
- 099 07 110155000
- 099 08 120135000
- 099 09 140124000
- 099 10 120154000
- 099 11 100164000
- 099 12 030144000
- 099 13 020194000
- 099 14 160234000
- 099 15 150344000
- 099 16 160364002
- 099 17 150254000
- 099 18 150164000
- 099 19 100114000
- 099 20 140284000
- 099 21 110155000
- 099 22 150075000
- 099 23 080125000
- 099 24 080255002
- 100 01 090155003
- 100 02 140405000
- 100 03 080264000
- 100 04 080235000
- 100 05 080235000
- 100 06 070175000
- 100 07 070184000
- 100 08 070214000
- 100 09 060304000
- 100 10 070424000
- 100 11 070394000
- 100 12 080402000
- 100 13 080331000
- 100 14 070461000
- 100 15 070521000
- 100 16 070522000
- 100 17 070522000
- 100 18 070514000
- 100 19 070484000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-49	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 100 20 070375000
- 100 21 070316000
- 100 22 070326000
- 100 23 070346000
- 100 24 060315000
- 101 01 060275000
- 101 02 070306000
- 101 03 070266000
- 101 04 090206000
- 101 05 110156000
- 101 06 030106000
- 101 07 050206000
- 101 08 050156000
- 101 09 070105000
- 101 10 060154000
- 101 11 030204000
- 101 12 020164000
- 101 13 160214000
- 101 14 160264000
- 101 15 160304000
- 101 16 160305000
- 101 17 160495000
- 101 18 150546000
- 101 19 150556000
- 101 20 150505000
- 101 21 150435000
- 101 22 150385000
- 101 23 160345000
- 101 24 150255000
- 102 01 140206000
- 102 02 150255000
- 102 03 140175000
- 102 04 120135000
- 102 05 110125000
- 102 06 150175000
- 102 07 110225000
- 102 08 100215000
- 102 09 100434000
- 102 10 110395002
- 102 11 110445000
- 102 12 110554000
- 102 13 110514000
- 102 14 110424000
- 102 15 100494000
- 102 16 110514000
- 102 17 110394000
- 102 18 100414000
- 102 19 100454000
- 102 20 100284000
- 102 21 100254000
- 102 22 100304000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-50	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

102 23 100254000
 102 24 100224000
 103 01 100204000
 103 02 100294000
 103 03 110314000
 103 04 100214000
 103 05 100254000
 103 06 100304000
 103 07 110304000
 103 08 100334000
 103 09 110364001
 103 10 110504000
 103 11 120374000
 103 12 120404001
 103 13 120364003
 103 14 120364005
 103 15 120514004
 103 16 120524010
 103 17 120554011
 103 18 120554004
 103 19 120414013
 103 20 120634006
 103 21 120684002
 103 22 120734001
 103 23 120594008
 103 24 120494020
 104 01 120464004
 104 02 110384000
 104 03 110384000
 104 04 100354000
 104 05 100424000
 104 06 100434000
 104 07 110414000
 104 08 110384000
 104 09 110434000
 104 10 110464000
 104 11 110494000
 104 12 110394005
 104 13 120315000
 104 14 130234000
 104 15 150465000
 104 16 150726025
 104 17 150816008
 104 18 150716005
 104 19 150626087
 104 20 150535000
 104 21 160236000
 104 22 010266000
 104 23 020435000
 104 24 030585000
 105 01 040505000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-51	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 105 02 040344000
- 105 03 040194000
- 105 04 070254000
- 105 05 070214000
- 105 06 060234000
- 105 07 110174000
- 105 08 120154007
- 105 09 070294010
- 105 10 090494000
- 105 11 090464001
- 105 12 100514001
- 105 13 080304043
- 105 14 080404000
- 105 15 080524000
- 105 16 080504000
- 105 17 080504012
- 105 18 080614005
- 105 19 080644000
- 105 20 090644000
- 105 21 090724001
- 105 22 090694005
- 105 23 090684001
- 105 24 090634003
- 106 01 090584000
- 106 02 090614001
- 106 03 090585000
- 106 04 090455000
- 106 05 090495000
- 106 06 090585000
- 106 07 080685000
- 106 08 080784000
- 106 09 090803000
- 106 10 090902000
- 106 11 090851000
- 106 12 090821000
- 106 13 080821000
- 106 14 080811000
- 106 15 090761000
- 106 16 090712000
- 106 17 090604000
- 106 18 090534000
- 106 19 090455000
- 106 20 080315000
- 106 21 080306000
- 106 22 080345000
- 106 23 080415000
- 106 24 080425000
- 107 01 090415000
- 107 02 090325000
- 107 03 090315000
- 107 04 090286000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-52	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

107 05 090295000
 107 06 070265000
 107 07 090245000
 107 08 100324000
 107 09 080303000
 107 10 080283000
 107 11 050232000
 107 12 030262000
 107 13 030252000
 107 14 010213000
 107 15 160254000
 107 16 160355000
 107 17 150426000
 107 18 150476000
 107 19 150466000
 107 20 150415000
 107 21 150336000
 107 22 010335000
 107 23 020375000
 107 24 030305000
 108 01 030295000
 108 02 030265000
 108 03 010295000
 108 04 010305000
 108 05 010334000
 108 06 010344000
 108 07 010334000
 108 08 160274000
 108 09 150294000
 108 10 150305000
 108 11 150304000
 108 12 150365000
 108 13 150405000
 108 14 150426000
 108 15 150457000
 108 16 150337000
 108 17 150257000
 108 18 150337000
 108 19 160397000
 108 20 160367000
 108 21 150407000
 108 22 150357000
 108 23 150327000
 108 24 150317000
 109 01 150277000
 109 02 160186000
 109 03 020166000
 109 04 150066000
 109 05 150166000
 109 06 130116000
 109 07 160126000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-53	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 109 08 160105000
- 109 09 070214000
- 109 10 060213000
- 109 11 050264000
- 109 12 020214000
- 109 13 020214000
- 109 14 160225000
- 109 15 150446000
- 109 16 150587000
- 109 17 150447000
- 109 18 150507000
- 109 19 150386000
- 109 20 150296000
- 109 21 150327000
- 109 22 140256000
- 109 23 110145000
- 109 24 120106000
- 110 01 120106000
- 110 02 120106000
- 110 03 130097000
- 110 04 090227000
- 110 05 090187000
- 110 06 110147000
- 110 07 150157000
- 110 08 150226000
- 110 09 020265000
- 110 10 030295000
- 110 11 010265000
- 110 12 010306000
- 110 13 010296000
- 110 14 030426000
- 110 15 020536000
- 110 16 020726000
- 110 17 020786000
- 110 18 020627000
- 110 19 020567000
- 110 20 020527000
- 110 21 030476000
- 110 22 040396000
- 110 23 040326000
- 110 24 040387000
- 111 01 050426000
- 111 02 050456000
- 111 03 050365000
- 111 04 060335000
- 111 05 070245000
- 111 06 070325000
- 111 07 070345000
- 111 08 080494000
- 111 09 070532000
- 111 10 070502000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-54	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 111 11 080511000
- 111 12 090451000
- 111 13 080392000
- 111 14 070361000
- 111 15 090322000
- 111 16 090252000
- 111 17 110154000
- 111 18 160575000
- 111 19 160625000
- 111 20 160675000
- 111 21 150515000
- 111 22 150464000
- 111 23 150434000
- 111 24 150544000
- 112 01 160414000
- 112 02 160304000
- 112 03 130175000
- 112 04 130215000
- 112 05 130214000
- 112 06 130175000
- 112 07 130244000
- 112 08 130402000
- 112 09 140451000
- 112 10 150553000
- 112 11 160705000
- 112 12 160735000
- 112 13 160715000
- 112 14 150635000
- 112 15 150694000
- 112 16 150634000
- 112 17 150614000
- 112 18 140564000
- 112 19 150464000
- 112 20 140314000
- 112 21 140304000
- 112 22 140214000
- 112 23 120175000
- 112 24 130165000
- 113 01 110176000
- 113 02 120136000
- 113 03 150246000
- 113 04 150286000
- 113 05 090206000
- 113 06 090196000
- 113 07 120146000
- 113 08 160216000
- 113 09 010176000
- 113 10 040284000
- 113 11 050342000
- 113 12 030243000
- 113 13 160283000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-55	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

113 14 150345000
 113 15 150416000
 113 16 150366000
 113 17 150317000
 113 18 150177000
 113 19 150277000
 113 20 130177000
 113 21 100135000
 113 22 080235000
 113 23 090136000
 113 24 100175000
 114 01 160125000
 114 02 160075000
 114 03 130115000
 114 04 140136000
 114 05 100066000
 114 06 150056000
 114 07 150065000
 114 08 010105000
 114 09 040254000
 114 10 040263000
 114 11 050213000
 114 12 020214000
 114 13 020193000
 114 14 030204000
 114 15 010174000
 114 16 150415000
 114 17 130383000
 114 18 120424000
 114 19 120444000
 114 20 110364022
 114 21 120264019
 114 22 120294000
 114 23 120234000
 114 24 110164000
 115 01 100214000
 115 02 100154000
 115 03 100224000
 115 04 090294000
 115 05 100285000
 115 06 080234000
 115 07 080314000
 115 08 080354000
 115 09 090413000
 115 10 080452000
 115 11 090461000
 115 12 080551000
 115 13 070631000
 115 14 070571000
 115 15 070581000
 115 16 070522000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-56	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

115 17 080443000
 115 18 080384000
 115 19 090305000
 115 20 090246000
 115 21 100155000
 115 22 120076000
 115 23 070206000
 115 24 120306000
 116 01 110286000
 116 02 110125000
 116 03 150125000
 116 04 130095000
 116 05 130175000
 116 06 120295000
 116 07 120265000
 116 08 130393000
 116 09 140441000
 116 10 140481000
 116 11 150561000
 116 12 160674000
 116 13 150583000
 116 14 150723000
 116 15 150734000
 116 16 150724000
 116 17 150734000
 116 18 150764000
 116 19 140614000
 116 20 140504000
 116 21 150664000
 116 22 150764000
 116 23 150684000
 116 24 150634000
 117 01 150504000
 117 02 150525000
 117 03 160315009
 117 04 010385001
 117 05 020405000
 117 06 030555000
 117 07 020555000
 117 08 020475000
 117 09 030425000
 117 10 030605000
 117 11 040605000
 117 12 030595000
 117 13 070635002
 117 14 090324000
 117 15 080224002
 117 16 120085005
 117 17 150104009
 117 18 150274003
 117 19 160294007



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-57	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

117 20 010414010
 117 21 010344008
 117 22 030374003
 117 23 040374000
 117 24 040364000
 118 01 040394000
 118 02 040344000
 118 03 050314000
 118 04 040285000
 118 05 040285000
 118 06 040285000
 118 07 050254000
 118 08 050384000
 118 09 060423000
 118 10 060453000
 118 11 060441000
 118 12 050571000
 118 13 050521000
 118 14 050531000
 118 15 040461000
 118 16 050514000
 118 17 050604000
 118 18 060514000
 118 19 050445001
 118 20 070455000
 118 21 050534000
 118 22 060604000
 118 23 070804000
 118 24 070714000
 119 01 070794000
 119 02 070734000
 119 03 070724000
 119 04 070604000
 119 05 070664000
 119 06 070694000
 119 07 070754000
 119 08 070703000
 119 09 070731000
 119 10 070681000
 119 11 070651000
 119 12 060641000
 119 13 060611000
 119 14 060571000
 119 15 060531000
 119 16 060462000
 119 17 060363000
 119 18 040304000
 119 19 030344000
 119 20 020355000
 119 21 020445000
 119 22 010495000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-58	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

119 23 010475000
 119 24 010535000
 120 01 010564000
 120 02 010524000
 120 03 010544000
 120 04 010604000
 120 05 010454000
 120 06 010314000
 120 07 010364000
 120 08 010464000
 120 09 020424000
 120 10 020524000
 120 11 020454000
 120 12 030514000
 120 13 020654000
 120 14 020634000
 120 15 020515000
 120 16 020615000
 120 17 020595000
 120 18 010555000
 120 19 010505000
 120 20 010475000
 120 21 160445000
 120 22 010575000
 120 23 010535000
 120 24 010494000
 121 01 010554000
 121 02 010524000
 121 03 010374000
 121 04 010304000
 121 05 160294000
 121 06 010364000
 121 07 010404000
 121 08 020444000
 121 09 020344000
 121 10 020304000
 121 11 020354000
 121 12 010475000
 121 13 160465000
 121 14 150586000
 121 15 150596000
 121 16 160536000
 121 17 020675000
 121 18 020635000
 121 19 010585000
 121 20 160406000
 121 21 150476000
 121 22 150445000
 121 23 150435000
 121 24 150435000
 122 01 150395000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-59	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 122 02 150395000
- 122 03 150385000
- 122 04 160385000
- 122 05 160394000
- 122 06 160345000
- 122 07 150375000
- 122 08 150355000
- 122 09 010294000
- 122 10 020294000
- 122 11 030414000
- 122 12 030535000
- 122 13 030435000
- 122 14 020465000
- 122 15 020565000
- 122 16 020595000
- 122 17 020575000
- 122 18 010456000
- 122 19 150367000
- 122 20 150526000
- 122 21 150566000
- 122 22 150566000
- 122 23 150546000
- 122 24 150556000
- 123 01 150515000
- 123 02 150555000
- 123 03 150545000
- 123 04 150615000
- 123 05 150575000
- 123 06 150555000
- 123 07 150645000
- 123 08 150595000
- 123 09 150615000
- 123 10 150556000
- 123 11 010475000
- 123 12 160465000
- 123 13 150546000
- 123 14 150596000
- 123 15 150647000
- 123 16 150677000
- 123 17 150727000
- 123 18 150727000
- 123 19 150797000
- 123 20 160836000
- 123 21 020995000
- 123 22 021025000
- 123 23 040565002
- 123 24 050255004
- 124 01 080334015
- 124 02 080394000
- 124 03 070514000
- 124 04 070604000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-60	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 124 05 070614000
- 124 06 070594002
- 124 07 070544002
- 124 08 070424002
- 124 09 080414000
- 124 10 070434000
- 124 11 080464000
- 124 12 080414000
- 124 13 080424003
- 124 14 090464002
- 124 15 090474003
- 124 16 080524003
- 124 17 090494002
- 124 18 090624000
- 124 19 090594001
- 124 20 090514004
- 124 21 100404003
- 124 22 090385000
- 124 23 090285000
- 124 24 070255000
- 125 01 070285000
- 125 02 060345000
- 125 03 060355000
- 125 04 070345000
- 125 05 070285000
- 125 06 070465000
- 125 07 070634000
- 125 08 070594000
- 125 09 070592000
- 125 10 070551000
- 125 11 070551000
- 125 12 070521000
- 125 13 060461000
- 125 14 060461000
- 125 15 050412000
- 125 16 050372000
- 125 17 050423000
- 125 18 040404000
- 125 19 030324000
- 125 20 020364000
- 125 21 020455000
- 125 22 020535000
- 125 23 020595000
- 125 24 020535000
- 126 01 020525000
- 126 02 020515000
- 126 03 020525000
- 126 04 020455000
- 126 05 020544000
- 126 06 020604000
- 126 07 020514000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-61	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

126 08 020514000
 126 09 030482000
 126 10 020331000
 126 11 020391000
 126 12 030462000
 126 13 040511000
 126 14 040511000
 126 15 040501000
 126 16 040462000
 126 17 040364000
 126 18 040425002
 126 19 020245000
 126 20 010395000
 126 21 010335000
 126 22 020295000
 126 23 040255000
 126 24 060345000
 127 01 080415000
 127 02 090355000
 127 03 090285000
 127 04 090275000
 127 05 090275000
 127 06 090315000
 127 07 090294000
 127 08 080324000
 127 09 090393000
 127 10 090342000
 127 11 080242000
 127 12 040272000
 127 13 030242000
 127 14 030252000
 127 15 040352000
 127 16 040342000
 127 17 040354000
 127 18 030214000
 127 19 150425000
 127 20 150395000
 127 21 150345000
 127 22 160446000
 127 23 010365000
 127 24 020235000
 128 01 010245000
 128 02 010354000
 128 03 010314000
 128 04 010264000
 128 05 010295000
 128 06 120175000
 128 07 140175000
 128 08 150264000
 128 09 160404000
 128 10 160533000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-62	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 128 11 150464000
- 128 12 150465000
- 128 13 150356000
- 128 14 160197000
- 128 15 080345007
- 128 16 070195000
- 128 17 060274000
- 128 18 060264000
- 128 19 060225000
- 128 20 060335000
- 128 21 050395000
- 128 22 080175000
- 128 23 080266000
- 128 24 090375000
- 129 01 100545000
- 129 02 100505000
- 129 03 100435000
- 129 04 100464000
- 129 05 110285000
- 129 06 100335000
- 129 07 130314000
- 129 08 130403000
- 129 09 130401000
- 129 10 140461000
- 129 11 130381000
- 129 12 140401000
- 129 13 160551000
- 129 14 160841000
- 129 15 160851000
- 129 16 160801000
- 129 17 160732000
- 129 18 160694000
- 129 19 150704000
- 129 20 150674000
- 129 21 140445000
- 129 22 140405000
- 129 23 130225000
- 129 24 130185000
- 130 01 130175000
- 130 02 140255000
- 130 03 140224000
- 130 04 140244000
- 130 05 140164000
- 130 06 120194000
- 130 07 140134000
- 130 08 010264000
- 130 09 010253000
- 130 10 160164000
- 130 11 010204000
- 130 12 010204000
- 130 13 160255000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-63	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 130 14 160366000
- 130 15 160386000
- 130 16 160386000
- 130 17 150396000
- 130 18 150375000
- 130 19 150325000
- 130 20 140136000
- 130 21 120216000
- 130 22 150306000
- 130 23 100376000
- 130 24 090665081
- 131 01 110425000
- 131 02 100296031
- 131 03 160686001
- 131 04 010575000
- 131 05 070215000
- 131 06 080195000
- 131 07 090165000
- 131 08 050104000
- 131 09 160184000
- 131 10 160404000
- 131 11 150624000
- 131 12 150575000
- 131 13 150535000
- 131 14 150535000
- 131 15 150495000
- 131 16 150536000
- 131 17 150546000
- 131 18 150546000
- 131 19 150376000
- 131 20 150277000
- 131 21 150257000
- 131 22 150227000
- 131 23 020196000
- 131 24 030296000
- 132 01 030416000
- 132 02 030356000
- 132 03 030226000
- 132 04 040185000
- 132 05 120195000
- 132 06 150216000
- 132 07 150216000
- 132 08 160215000
- 132 09 160225000
- 132 10 160194000
- 132 11 010184000
- 132 12 020214000
- 132 13 010215000
- 132 14 160246000
- 132 15 150266000
- 132 16 150627000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-64	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 132 17 150387000
- 132 18 150397000
- 132 19 150327000
- 132 20 150257000
- 132 21 150247000
- 132 22 150177000
- 132 23 160126000
- 132 24 160146000
- 133 01 160215000
- 133 02 160205000
- 133 03 160195000
- 133 04 010156000
- 133 05 160125000
- 133 06 010185000
- 133 07 020175000
- 133 08 030175000
- 133 09 020214000
- 133 10 020204000
- 133 11 010235017
- 133 12 030324000
- 133 13 030334000
- 133 14 030384000
- 133 15 030344000
- 133 16 030305000
- 133 17 010325000
- 133 18 010306000
- 133 19 020315000
- 133 20 010316000
- 133 21 150216000
- 133 22 150256000
- 133 23 160306000
- 133 24 150256000
- 134 01 160245000
- 134 02 020215000
- 134 03 030225000
- 134 04 030185000
- 134 05 010125000
- 134 06 160165000
- 134 07 160215000
- 134 08 020234000
- 134 09 020184000
- 134 10 160194000
- 134 11 160264000
- 134 12 150425000
- 134 13 150455000
- 134 14 150505000
- 134 15 150576000
- 134 16 150556000
- 134 17 150576000
- 134 18 150457000
- 134 19 150347000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-65	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

134 20 140267000
 134 21 150246000
 134 22 150256000
 134 23 150326000
 134 24 150315000
 135 01 150325000
 135 02 150325000
 135 03 150255000
 135 04 140155000
 135 05 120135000
 135 06 120125000
 135 07 130124000
 135 08 130134000
 135 09 160204000
 135 10 010174000
 135 11 160214000
 135 12 160275000
 135 13 150465000
 135 14 150466000
 135 15 150516000
 135 16 150476000
 135 17 150416000
 135 18 020445000
 135 19 020466000
 135 20 010426000
 135 21 010465000
 135 22 010425000
 135 23 010415000
 135 24 020485000
 136 01 020445000
 136 02 020415000
 136 03 020335000
 136 04 010325000
 136 05 010335000
 136 06 010355000
 136 07 020374000
 136 08 030394000
 136 09 030344000
 136 10 030304000
 136 11 030294000
 136 12 030303000
 136 13 030313000
 136 14 030334000
 136 15 030404000
 136 16 030464000
 136 17 030435000
 136 18 020415000
 136 19 020385000
 136 20 020426000
 136 21 020386000
 136 22 030515000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-66	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 136 23 070574000
- 136 24 060254002
- 137 01 030224000
- 137 02 020274000
- 137 03 030254000
- 137 04 030314000
- 137 05 040275000
- 137 06 050154000
- 137 07 050184000
- 137 08 060194000
- 137 09 070084000
- 137 10 050174000
- 137 11 050174000
- 137 12 070153000
- 137 13 050213000
- 137 14 040233000
- 137 15 060164000
- 137 16 030224000
- 137 17 040154000
- 137 18 010145000
- 137 19 160315000
- 137 20 160345000
- 137 21 150235000
- 137 22 120175000
- 137 23 130215000
- 137 24 140255000
- 138 01 150245000
- 138 02 150215000
- 138 03 130145000
- 138 04 120105000
- 138 05 120256000
- 138 06 130145000
- 138 07 130175000
- 138 08 150244000
- 138 09 010234000
- 138 10 010264000
- 138 11 010244000
- 138 12 160384000
- 138 13 160404000
- 138 14 160504000
- 138 15 160754000
- 138 16 160804000
- 138 17 150584000
- 138 18 150594000
- 138 19 150624000
- 138 20 150484000
- 138 21 140375000
- 138 22 150335000
- 138 23 010215000
- 138 24 160125000
- 139 01 160275000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-67	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 139 02 160334000
- 139 03 160454000
- 139 04 010454000
- 139 05 010384000
- 139 06 020384000
- 139 07 020344000
- 139 08 020354000
- 139 09 030384000
- 139 10 030393000
- 139 11 030382000
- 139 12 040462000
- 139 13 030422000
- 139 14 030503000
- 139 15 030464000
- 139 16 030474000
- 139 17 030464000
- 139 18 030515000
- 139 19 020385000
- 139 20 030315000
- 139 21 050305000
- 139 22 050335005
- 139 23 050235000
- 139 24 040315000
- 140 01 040344000
- 140 02 040345000
- 140 03 030284001
- 140 04 040264000
- 140 05 050244000
- 140 06 050314000
- 140 07 050304000
- 140 08 060234000
- 140 09 070264000
- 140 10 070304000
- 140 11 070224000
- 140 12 080194000
- 140 13 070124000
- 140 14 070194000
- 140 15 100514002
- 140 16 110394001
- 140 17 110304000
- 140 18 110274000
- 140 19 120264000
- 140 20 130095000
- 140 21 130115000
- 140 22 130194000
- 140 23 140184000
- 140 24 130164000
- 141 01 120154000
- 141 02 120225000
- 141 03 120175000
- 141 04 120225000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-68	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 141 05 120225000
- 141 06 130175000
- 141 07 130244000
- 141 08 130304000
- 141 09 130294000
- 141 10 140333000
- 141 11 140342000
- 141 12 160501000
- 141 13 160662000
- 141 14 160621000
- 141 15 160671000
- 141 16 150702000
- 141 17 150634000
- 141 18 150614000
- 141 19 160594000
- 141 20 160544000
- 141 21 160584000
- 141 22 160624000
- 141 23 160514000
- 141 24 010514000
- 142 01 010474000
- 142 02 010474000
- 142 03 020524000
- 142 04 020464000
- 142 05 020414000
- 142 06 020414000
- 142 07 020434000
- 142 08 030294000
- 142 09 040334000
- 142 10 040344000
- 142 11 020364003
- 142 12 160374000
- 142 13 150284000
- 142 14 090094000
- 142 15 090174000
- 142 16 080194000
- 142 17 080184000
- 142 18 100154000
- 142 19 100054000
- 142 20 150215000
- 142 21 160315000
- 142 22 160245000
- 142 23 160294000
- 142 24 010214000
- 143 01 020234000
- 143 02 160345000
- 143 03 060255000
- 143 04 010315000
- 143 05 160355000
- 143 06 020254000
- 143 07 050274000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-69	of C-173

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by		Date
Reviewed by		Date
Approved by		Date

- 143 08 060414000
- 143 09 070433000
- 143 10 060254000
- 143 11 050254000
- 143 12 040353000
- 143 13 050333000
- 143 14 040342000
- 143 15 030273000
- 143 16 030334000
- 143 17 030304000
- 143 18 030255000
- 143 19 150286000
- 143 20 150346000
- 143 21 160296000
- 143 22 020316000
- 143 23 020305000
- 143 24 020445000
- 144 01 020475000
- 144 02 030235000
- 144 03 010195000
- 144 04 020245000
- 144 05 030205000
- 144 06 030215000
- 144 07 040285000
- 144 08 040304000
- 144 09 040354000
- 144 10 050373000
- 144 11 050363000
- 144 12 050343000
- 144 13 040283000
- 144 14 030294000
- 144 15 040423000
- 144 16 040424000
- 144 17 030395000
- 144 18 030385000
- 144 19 030296000
- 144 20 020266000
- 144 21 020346000
- 144 22 020436000
- 144 23 020365000
- 144 24 030335000
- 145 01 030375000
- 145 02 030435000
- 145 03 030405000
- 145 04 040355000
- 145 05 030315000
- 145 06 030345000
- 145 07 030394000
- 145 08 030444000
- 145 09 030434000
- 145 10 030383000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-70	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 145 11 040453000
- 145 12 040552000
- 145 13 040523000
- 145 14 030464000
- 145 15 030504000
- 145 16 030514000
- 145 17 030595000
- 145 18 030555000
- 145 19 030485000
- 145 20 020505000
- 145 21 040325000
- 145 22 030445000
- 145 23 030505000
- 145 24 040445000
- 146 01 040385000
- 146 02 050385000
- 146 03 060445000
- 146 04 070345000
- 146 05 080286000
- 146 06 080405000
- 146 07 080315000
- 146 08 080334000
- 146 09 090244000
- 146 10 090214000
- 146 11 080223000
- 146 12 050273000
- 146 13 050273000
- 146 14 050263000
- 146 15 160554000
- 146 16 150625000
- 146 17 150655000
- 146 18 150715000
- 146 19 150644000
- 146 20 160584007
- 146 21 020395019
- 146 22 160754001
- 146 23 160674000
- 146 24 010404000
- 147 01 010314000
- 147 02 150284000
- 147 03 120205000
- 147 04 120294000
- 147 05 120234000
- 147 06 120174000
- 147 07 130214003
- 147 08 120204001
- 147 09 110294010
- 147 10 110293000
- 147 11 100164000
- 147 12 110174000
- 147 13 090294000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-71	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

147 14 080253000
 147 15 120184000
 147 16 030184000
 147 17 160164000
 147 18 150544000
 147 19 150644000
 147 20 160734000
 147 21 160694000
 147 22 160714000
 147 23 160404000
 147 24 010254000
 148 01 120135000
 148 02 110075000
 148 03 030195000
 148 04 080125000
 148 05 110135000
 148 06 100195000
 148 07 100344000
 148 08 110374000
 148 09 100414000
 148 10 100273000
 148 11 030154000
 148 12 010253000
 148 13 160291000
 148 14 150422000
 148 15 150513000
 148 16 160563000
 148 17 150534000
 148 18 150634000
 148 19 160744000
 148 20 150804000
 148 21 150814000
 148 22 150764000
 148 23 150724000
 148 24 160604000
 149 01 160474000
 149 02 160424000
 149 03 160314000
 149 04 010434000
 149 05 030395000
 149 06 020514001
 149 07 010414000
 149 08 040234000
 149 09 040274000
 149 10 040254000
 149 11 060434000
 149 12 060414000
 149 13 060504000
 149 14 070594000
 149 15 060504000
 149 16 070534000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-72	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

149 17 060464000
 149 18 070465000
 149 19 060395000
 149 20 050285000
 149 21 040335000
 149 22 060435000
 149 23 070495000
 149 24 070445000
 150 01 070455000
 150 02 080545000
 150 03 080495000
 150 04 080445000
 150 05 090525000
 150 06 090555000
 150 07 090484000
 150 08 090424000
 150 09 090383000
 150 10 090382000
 150 11 080303000
 150 12 070412000
 150 13 070511000
 150 14 070542000
 150 15 070512000
 150 16 070553000
 150 17 080484000
 150 18 080504000
 150 19 080375000
 150 20 090275000
 150 21 110275000
 150 22 130196000
 150 23 130176000
 150 24 130186000
 151 01 140206000
 151 02 130166000
 151 03 130186000
 151 04 130126000
 151 05 130126000
 151 06 120206000
 151 07 120145000
 151 08 130214000
 151 09 140253000
 151 10 150343000
 151 11 150501000
 151 12 150501000
 151 13 150492000
 151 14 150452000
 151 15 150484000
 151 16 150444000
 151 17 150384000
 151 18 010354000
 151 19 020354000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-73	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

151 20 020384000
 151 21 020424000
 151 22 010384000
 151 23 020384000
 151 24 020334000
 152 01 010214000
 152 02 120135000
 152 03 120195000
 152 04 130185000
 152 05 140255000
 152 06 140214000
 152 07 130164000
 152 08 130194004
 152 09 130204000
 152 10 140314006
 152 11 130254004
 152 12 130294002
 152 13 140344000
 152 14 140234013
 152 15 120224021
 152 16 110384013
 152 17 110404000
 152 18 110464000
 152 19 120384000
 152 20 110384000
 152 21 110354000
 152 22 100344000
 152 23 100284000
 152 24 100234001
 153 01 100254000
 153 02 080174000
 153 03 070174000
 153 04 110094000
 153 05 100114000
 153 06 110134000
 153 07 120144000
 153 08 130094000
 153 09 010134000
 153 10 030114000
 153 11 010194000
 153 12 160214000
 153 13 150254000
 153 14 010304000
 153 15 060584000
 153 16 070555009
 153 17 050315002
 153 18 020394000
 153 19 030304000
 153 20 020284000
 153 21 010304000
 153 22 130215000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-74	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 153 23 120245000
- 153 24 150285000
- 154 01 160335000
- 154 02 010384000
- 154 03 160395000
- 154 04 020305000
- 154 05 050205000
- 154 06 040365000
- 154 07 050415000
- 154 08 050334000
- 154 09 050294000
- 154 10 040483000
- 154 11 050493000
- 154 12 050413000
- 154 13 050393000
- 154 14 040372000
- 154 15 030414000
- 154 16 040584000
- 154 17 060324000
- 154 18 070144000
- 154 19 160144000
- 154 20 030444006
- 154 21 100245002
- 154 22 010185000
- 154 23 020215000
- 154 24 050075000
- 155 01 040135000
- 155 02 060245000
- 155 03 040255000
- 155 04 040305000
- 155 05 050255000
- 155 06 060365000
- 155 07 060364000
- 155 08 070394000
- 155 09 060314000
- 155 10 070373000
- 155 11 060354000
- 155 12 070453000
- 155 13 080443000
- 155 14 070403000
- 155 15 070353000
- 155 16 070384000
- 155 17 070374000
- 155 18 060264000
- 155 19 050205000
- 155 20 060195000
- 155 21 050095000
- 155 22 040136000
- 155 23 040176000
- 155 24 030256000
- 156 01 030326000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-75	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 156 02 040286000
- 156 03 090335000
- 156 04 110326000
- 156 05 110316000
- 156 06 110325000
- 156 07 110394000
- 156 08 120284000
- 156 09 120274000
- 156 10 120264000
- 156 11 120254000
- 156 12 120254000
- 156 13 160313000
- 156 14 160504000
- 156 15 150424000
- 156 16 140344000
- 156 17 130235000
- 156 18 120165000
- 156 19 120175000
- 156 20 130145000
- 156 21 110285000
- 156 22 120215000
- 156 23 120255000
- 156 24 120225000
- 157 01 120304000
- 157 02 120374000
- 157 03 120354000
- 157 04 110384015
- 157 05 120364012
- 157 06 120464005
- 157 07 120514006
- 157 08 120464000
- 157 09 120334000
- 157 10 120344002
- 157 11 120424000
- 157 12 130394000
- 157 13 120434000
- 157 14 120514000
- 157 15 130434003
- 157 16 120414008
- 157 17 110414018
- 157 18 110474019
- 157 19 100424013
- 157 20 110444005
- 157 21 110464003
- 157 22 110474000
- 157 23 120454000
- 157 24 120454000
- 158 01 110434000
- 158 02 110394000
- 158 03 110394000
- 158 04 110394000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	C-76	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

158 05 110394000
 158 06 100314000
 158 07 100344001
 158 08 110394000
 158 09 100414000
 158 10 100294000
 158 11 100344000
 158 12 100324000
 158 13 100344000
 158 14 090224000
 158 15 090114000
 158 16 110134000
 158 17 090104000
 158 18 140074000
 158 19 140104000
 158 20 140104000
 158 21 120124000
 158 22 140115000
 158 23 130155000
 158 24 150175000
 159 01 010274000
 159 02 030274000
 159 03 030195000
 159 04 040155000
 159 05 050104000
 159 06 080074000
 159 07 100084000
 159 08 030174000
 159 09 010244000
 159 10 160273000
 159 11 160292000
 159 12 150314000
 159 13 160324000
 159 14 150375000
 159 15 150425000
 159 16 150415000
 159 17 150485000
 159 18 150495000
 159 19 150434000
 159 20 150434000
 159 21 150395000
 159 22 150265000
 159 23 020345000
 159 24 030275000
 160 01 030255000
 160 02 030285000
 160 03 040225000
 160 04 030185000
 160 05 020205000
 160 06 030195000
 160 07 020175000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-77 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

160 08 030174000
 160 09 030264000
 160 10 030234000
 160 11 030204000
 160 12 010194000
 160 13 150364000
 160 14 160445000
 160 15 150615000
 160 16 150655000
 160 17 150555000
 160 18 150465000
 160 19 140355000
 160 20 140246000
 160 21 140217000
 160 22 150236000
 160 23 020275000
 160 24 020265000
 161 01 030285000
 161 02 020214000
 161 03 020214000
 161 04 020204000
 161 05 030234000
 161 06 030254000
 161 07 030224000
 161 08 040284000
 161 09 050264000
 161 10 040254000
 161 11 010194000
 161 12 010234000
 161 13 010265000
 161 14 020295000
 161 15 040384000
 161 16 040395000
 161 17 030375000
 161 18 030375000
 161 19 030365000
 161 20 030306000
 161 21 040296000
 161 22 030306000
 161 23 030316000
 161 24 040296000
 162 01 040286000
 162 02 040305000
 162 03 040335000
 162 04 040225000
 162 05 040175000
 162 06 050185000
 162 07 050305000
 162 08 060334000
 162 09 070394000
 162 10 070324000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-78	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 162 11 080304000
- 162 12 070244000
- 162 13 070304000
- 162 14 080394000
- 162 15 090414000
- 162 16 080374000
- 162 17 090294000
- 162 18 100534074
- 162 19 020175003
- 162 20 030255000
- 162 21 050165002
- 162 22 080245005
- 162 23 110294000
- 162 24 120304000
- 163 01 120404000
- 163 02 120344000
- 163 03 110304000
- 163 04 110384002
- 163 05 110454009
- 163 06 120294001
- 163 07 120264000
- 163 08 120324001
- 163 09 110514000
- 163 10 120464000
- 163 11 120384000
- 163 12 120244007
- 163 13 120294104
- 163 14 120344003
- 163 15 110344001
- 163 16 120234001
- 163 17 130164000
- 163 18 120154000
- 163 19 150054000
- 163 20 120065000
- 163 21 110145001
- 163 22 090125000
- 163 23 070215000
- 163 24 070265000
- 164 01 080255000
- 164 02 090225000
- 164 03 090295000
- 164 04 100236000
- 164 05 100255000
- 164 06 100215000
- 164 07 100344000
- 164 08 110384000
- 164 09 120314000
- 164 10 120274000
- 164 11 100214000
- 164 12 080164000
- 164 13 080214000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-79	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

164 14 060304000
 164 15 070254000
 164 16 090214000
 164 17 160374000
 164 18 150774000
 164 19 150794000
 164 20 160834000
 164 21 160724000
 164 22 010594000
 164 23 010594000
 164 24 010574000
 165 01 020514000
 165 02 010574000
 165 03 010504000
 165 04 010514000
 165 05 010474000
 165 06 010524000
 165 07 010494000
 165 08 160474000
 165 09 160464000
 165 10 160514000
 165 11 150574000
 165 12 150544000
 165 13 150654000
 165 14 150714000
 165 15 150754000
 165 16 150774000
 165 17 150824000
 165 18 150874000
 165 19 150844000
 165 20 160814000
 165 21 160784000
 165 22 160744000
 165 23 160724000
 165 24 160704000
 166 01 160574000
 166 02 160554000
 166 03 160534000
 166 04 010534000
 166 05 010544000
 166 06 010514000
 166 07 010514000
 166 08 020564000
 166 09 020444000
 166 10 030594000
 166 11 030574000
 166 12 030463000
 166 13 040314000
 166 14 040324000
 166 15 030284000
 166 16 020334000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-80	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 166 17 020345000
- 166 18 010425000
- 166 19 010545000
- 166 20 160455000
- 166 21 030535060
- 166 22 010445000
- 166 23 160395000
- 166 24 100295000
- 167 01 140236000
- 167 02 150265000
- 167 03 010285000
- 167 04 020275000
- 167 05 020275000
- 167 06 020335000
- 167 07 030344000
- 167 08 040374000
- 167 09 030374000
- 167 10 040344000
- 167 11 030284000
- 167 12 030244000
- 167 13 030244000
- 167 14 160184000
- 167 15 150285000
- 167 16 010305000
- 167 17 020385000
- 167 18 020455000
- 167 19 040345000
- 167 20 140206000
- 167 21 010246000
- 167 22 010256000
- 167 23 140175000
- 167 24 150165000
- 168 01 030255000
- 168 02 030205000
- 168 03 040185000
- 168 04 030215000
- 168 05 020255000
- 168 06 020215000
- 168 07 020184000
- 168 08 020174000
- 168 09 020164000
- 168 10 030174000
- 168 11 040134000
- 168 12 030134000
- 168 13 020124000
- 168 14 160164000
- 168 15 160385000
- 168 16 160385005
- 168 17 160354002
- 168 18 160465000
- 168 19 160274000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-81	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

168 20 150224000
 168 21 150254000
 168 22 150435000
 168 23 150395000
 168 24 150285000
 169 01 160145000
 169 02 030114000
 169 03 010135000
 169 04 020165000
 169 05 020195000
 169 06 030204000
 169 07 030134000
 169 08 030074000
 169 09 010134000
 169 10 160164000
 169 11 010224000
 169 12 030253000
 169 13 020254000
 169 14 030254000
 169 15 010194000
 169 16 100225000
 169 17 150245018
 169 18 020216000
 169 19 010255000
 169 20 020284000
 169 21 060305022
 169 22 040255000
 169 23 010425000
 169 24 020325000
 170 01 030254000
 170 02 030334000
 170 03 040385000
 170 04 040364000
 170 05 040345000
 170 06 050294000
 170 07 040314000
 170 08 050314000
 170 09 050374000
 170 10 070344000
 170 11 060224000
 170 12 060244000
 170 13 070284000
 170 14 070314000
 170 15 070274000
 170 16 030154000
 170 17 030104000
 170 18 040225000
 170 19 050225000
 170 20 030275000
 170 21 020245000
 170 22 020115000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-82	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

170 23 030175000
 170 24 040175000
 171 01 050305000
 171 02 060425000
 171 03 070455000
 171 04 070375000
 171 05 070345000
 171 06 070335000
 171 07 070374000
 171 08 080524000
 171 09 080444000
 171 10 080463000
 171 11 070473000
 171 12 080513000
 171 13 080533000
 171 14 070613000
 171 15 070594000
 171 16 070514000
 171 17 080544000
 171 18 070554000
 171 19 080345000
 171 20 080275000
 171 21 070415000
 171 22 070426000
 171 23 080495000
 171 24 080625000
 172 01 090555000
 172 02 090555000
 172 03 090575000
 172 04 100365000
 172 05 090405000
 172 06 090395000
 172 07 090394000
 172 08 090394000
 172 09 090353000
 172 10 090253000
 172 11 080264000
 172 12 090253000
 172 13 050183000
 172 14 060173000
 172 15 050203000
 172 16 060203000
 172 17 070294000
 172 18 050284000
 172 19 060245000
 172 20 070225000
 172 21 070255000
 172 22 060215000
 172 23 040275000
 172 24 040255000
 173 01 050155000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-83	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 173 02 040215000
- 173 03 030235000
- 173 04 030285000
- 173 05 040285000
- 173 06 040125000
- 173 07 020184000
- 173 08 020174000
- 173 09 010174000
- 173 10 160303000
- 173 11 160402000
- 173 12 160402000
- 173 13 150593000
- 173 14 150693000
- 173 15 150794000
- 173 16 150714000
- 173 17 010484000
- 173 18 020534000
- 173 19 020544000
- 173 20 020504000
- 173 21 010514000
- 173 22 010594000
- 173 23 010584000
- 173 24 010594000
- 174 01 010554000
- 174 02 010604000
- 174 03 010594000
- 174 04 010604000
- 174 05 010574000
- 174 06 010544000
- 174 07 010514000
- 174 08 010514000
- 174 09 020524000
- 174 10 030614000
- 174 11 030614000
- 174 12 030534000
- 174 13 030493000
- 174 14 040374000
- 174 15 040314000
- 174 16 160184000
- 174 17 020255000
- 174 18 030195000
- 174 19 070465015
- 174 20 020165000
- 174 21 030275000
- 174 22 040205000
- 174 23 050225000
- 174 24 050265000
- 175 01 050305000
- 175 02 070275000
- 175 03 070215000
- 175 04 080225000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-84	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 175 05 090295000
- 175 06 090205000
- 175 07 100185000
- 175 08 100195000
- 175 09 100184000
- 175 10 110204000
- 175 11 120124000
- 175 12 150134000
- 175 13 010194000
- 175 14 010264000
- 175 15 020284000
- 175 16 030254000
- 175 17 020264000
- 175 18 020314000
- 175 19 030284000
- 175 20 030224000
- 175 21 030235000
- 175 22 030165000
- 175 23 030195000
- 175 24 030205000
- 176 01 030175000
- 176 02 030205000
- 176 03 040135000
- 176 04 050135000
- 176 05 060095000
- 176 06 070195000
- 176 07 100134000
- 176 08 100094000
- 176 09 160214000
- 176 10 160263000
- 176 11 150303000
- 176 12 150511000
- 176 13 150632000
- 176 14 150723000
- 176 15 150763000
- 176 16 150714000
- 176 17 150644000
- 176 18 150554000
- 176 19 150484000
- 176 20 150484000
- 176 21 150475000
- 176 22 160494000
- 176 23 160474000
- 176 24 160444000
- 177 01 150434000
- 177 02 160404000
- 177 03 160384000
- 177 04 160374000
- 177 05 010364000
- 177 06 010264000
- 177 07 010334000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-85	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

177 08 160304000
 177 09 150314000
 177 10 150313000
 177 11 150314000
 177 12 150384000
 177 13 150394000
 177 14 150485000
 177 15 010615033
 177 16 160805009
 177 17 150775014
 177 18 120256023
 177 19 040245009
 177 20 020265002
 177 21 150215001
 177 22 130176000
 177 23 120146000
 177 24 100146000
 178 01 120166000
 178 02 160175000
 178 03 020115000
 178 04 100105000
 178 05 100105000
 178 06 120085000
 178 07 090075000
 178 08 060164000
 178 09 070344000
 178 10 080344000
 178 11 070274000
 178 12 070394000
 178 13 070404000
 178 14 060384000
 178 15 070404000
 178 16 070444000
 178 17 070584000
 178 18 070585000
 178 19 070515000
 178 20 080376000
 178 21 070306000
 178 22 070315000
 178 23 060435000
 178 24 060425000
 179 01 070435000
 179 02 070405000
 179 03 070396000
 179 04 080256000
 179 05 070286000
 179 06 070236000
 179 07 070195000
 179 08 070194000
 179 09 060214000
 179 10 050294000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-86	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 179 11 030273000
- 179 12 040392000
- 179 13 040443000
- 179 14 030463000
- 179 15 030514000
- 179 16 040484000
- 179 17 040464000
- 179 18 040434000
- 179 19 040325000
- 179 20 040305000
- 179 21 040345000
- 179 22 040285000
- 179 23 030345000
- 179 24 030385000
- 180 01 030335000
- 180 02 030355000
- 180 03 040365000
- 180 04 040335000
- 180 05 040185000
- 180 06 060135000
- 180 07 080155000
- 180 08 070144000
- 180 09 080124000
- 180 10 100134000
- 180 11 020174000
- 180 12 010134000
- 180 13 160264000
- 180 14 160384000
- 180 15 160444000
- 180 16 160604000
- 180 17 160624000
- 180 18 160584000
- 180 19 160474000
- 180 20 160494000
- 180 21 160464000
- 180 22 160504000
- 180 23 010424000
- 180 24 020404000
- 181 01 040505027
- 181 02 050305002
- 181 03 070295000
- 181 04 070375000
- 181 05 070365000
- 181 06 080385000
- 181 07 070394000
- 181 08 080464000
- 181 09 070424000
- 181 10 080343000
- 181 11 070274000
- 181 12 070294000
- 181 13 070254000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-87	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

181 14 060293000
 181 15 050354000
 181 16 050374000
 181 17 050344000
 181 18 060314000
 181 19 050304000
 181 20 040235000
 181 21 030265000
 181 22 030215000
 181 23 030285000
 181 24 030305000
 182 01 040346000
 182 02 040346000
 182 03 040366000
 182 04 040326000
 182 05 040286000
 182 06 050155000
 182 07 050125000
 182 08 030144000
 182 09 030254000
 182 10 030274000
 182 11 030303000
 182 12 030303000
 182 13 040293000
 182 14 040323000
 182 15 040264000
 182 16 010414000
 182 17 150564000
 182 18 150514000
 182 19 150425000
 182 20 150395000
 182 21 160375000
 182 22 010415000
 182 23 030385000
 182 24 020355000
 183 01 010234000
 183 02 010284000
 183 03 010344000
 183 04 010354000
 183 05 160175000
 183 06 150205000
 183 07 160254000
 183 08 160224000
 183 09 150273000
 183 10 150303000
 183 11 150442000
 183 12 150483000
 183 13 150601000
 183 14 150692000
 183 15 150753000
 183 16 150684008



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-88	of C-173

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by		Date
Reviewed by		Date
Approved by		Date

- 183 17 160754072
- 183 18 150805000
- 183 19 160925000
- 183 20 160675000
- 183 21 010505000
- 183 22 010415000
- 183 23 010385000
- 183 24 010314000
- 184 01 010255000
- 184 02 020294000
- 184 03 020194000
- 184 04 020195000
- 184 05 070095000
- 184 06 150115000
- 184 07 040174000
- 184 08 060194000
- 184 09 070194000
- 184 10 080184000
- 184 11 080164000
- 184 12 100154000
- 184 13 090214000
- 184 14 010184000
- 184 15 160194000
- 184 16 150425000
- 184 17 150415000
- 184 18 150295000
- 184 19 160295000
- 184 20 010145000
- 184 21 010176000
- 184 22 020206000
- 184 23 030196000
- 184 24 050146000
- 185 01 090186000
- 185 02 110195000
- 185 03 110276000
- 185 04 100306000
- 185 05 100306000
- 185 06 100316000
- 185 07 100305000
- 185 08 110354000
- 185 09 110334000
- 185 10 120224000
- 185 11 110184000
- 185 12 110214000
- 185 13 090194000
- 185 14 090184000
- 185 15 080164000
- 185 16 080144000
- 185 17 150414000
- 185 18 160674000
- 185 19 160754000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	C-89	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 185 20 150744000
- 185 21 150555000
- 185 22 150634000
- 185 23 160584000
- 185 24 160554000
- 186 01 150445000
- 186 02 160474000
- 186 03 150255000
- 186 04 120136000
- 186 05 120136000
- 186 06 130126000
- 186 07 160285000
- 186 08 160374000
- 186 09 150443000
- 186 10 150502000
- 186 11 150591000
- 186 12 150702000
- 186 13 150744000
- 186 14 150754000
- 186 15 150834000
- 186 16 150854000
- 186 17 150894000
- 186 18 150874000
- 186 19 150834000
- 186 20 150724000
- 186 21 150584000
- 186 22 150734000
- 186 23 150724000
- 186 24 150674000
- 187 01 150664000
- 187 02 150574000
- 187 03 150494000
- 187 04 150424000
- 187 05 160314022
- 187 06 110135001
- 187 07 160165000
- 187 08 030274000
- 187 09 040264000
- 187 10 040323000
- 187 11 040374000
- 187 12 050424000
- 187 13 040374000
- 187 14 040414000
- 187 15 040424000
- 187 16 040444000
- 187 17 040375000
- 187 18 040345000
- 187 19 040275000
- 187 20 050375000
- 187 21 040275000
- 187 22 040345000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-90	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

187 23 040295000
 187 24 040305000
 188 01 050155000
 188 02 060295000
 188 03 070275000
 188 04 060385000
 188 05 070355000
 188 06 070375000
 188 07 080444000
 188 08 080474000
 188 09 090504000
 188 10 090533000
 188 11 080513000
 188 12 080463000
 188 13 070443000
 188 14 070463000
 188 15 070474000
 188 16 080434000
 188 17 070464000
 188 18 070344000
 188 19 070235000
 188 20 080285000
 188 21 090215000
 188 22 110155000
 188 23 100085000
 188 24 040186000
 189 01 060096000
 189 02 110136000
 189 03 120236000
 189 04 120086000
 189 05 120106000
 189 06 130156000
 189 07 140175000
 189 08 140314000
 189 09 150454000
 189 10 150513000
 189 11 150532000
 189 12 150544000
 189 13 150594000
 189 14 150715000
 189 15 150745000
 189 16 150785000
 189 17 150594000
 189 18 120305021
 189 19 100255001
 189 20 110106000
 189 21 020265000
 189 22 020324000
 189 23 020344000
 189 24 020364000
 190 01 030344000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-91	of C-173

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by		Date
Reviewed by		Date
Approved by		Date

- 190 02 040384000
- 190 03 040314000
- 190 04 040235000
- 190 05 050144000
- 190 06 040214000
- 190 07 030204000
- 190 08 040204000
- 190 09 060234000
- 190 10 040264000
- 190 11 030294000
- 190 12 040494000
- 190 13 040474000
- 190 14 040524000
- 190 15 040504000
- 190 16 050424000
- 190 17 050374000
- 190 18 050334000
- 190 19 050335000
- 190 20 030335000
- 190 21 030325000
- 190 22 030376000
- 190 23 030356000
- 190 24 040336000
- 191 01 040305000
- 191 02 060265000
- 191 03 050235000
- 191 04 040235000
- 191 05 040305000
- 191 06 060395000
- 191 07 070434000
- 191 08 070414000
- 191 09 070464000
- 191 10 070484000
- 191 11 070483000
- 191 12 060463000
- 191 13 070533000
- 191 14 070473000
- 191 15 070404000
- 191 16 070374000
- 191 17 070354000
- 191 18 080325000
- 191 19 090255000
- 191 20 100336000
- 191 21 090296000
- 191 22 090295000
- 191 23 090285000
- 191 24 090206000
- 192 01 100215000
- 192 02 120146000
- 192 03 130106000
- 192 04 120146000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-92	of C-173

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

- 192 05 100176000
- 192 06 100116000
- 192 07 100095000
- 192 08 070174000
- 192 09 060194000
- 192 10 070214000
- 192 11 070224000
- 192 12 040193000
- 192 13 050224000
- 192 14 050284000
- 192 15 050374000
- 192 16 050364000
- 192 17 050274000
- 192 18 060244000
- 192 19 060165000
- 192 20 050175000
- 192 21 080135000
- 192 22 050145000
- 192 23 070115000
- 192 24 030115000
- 193 01 040105000
- 193 02 090156000
- 193 03 150126000
- 193 04 150076000
- 193 05 100126000
- 193 06 110136000
- 193 07 110125000
- 193 08 110214000
- 193 09 120184000
- 193 10 120134000
- 193 11 150164000
- 193 12 010254000
- 193 13 160243000
- 193 14 150253000
- 193 15 150264000
- 193 16 150154000
- 193 17 150384000
- 193 18 160574000
- 193 19 160584000
- 193 20 150514000
- 193 21 150564000
- 193 22 150564000
- 193 23 160584000
- 193 24 160504000
- 194 01 150465001
- 194 02 150485000
- 194 03 150415000
- 194 04 160644000
- 194 05 160754000
- 194 06 150684000
- 194 07 160624034



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-93	of C-173

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by		Date
Reviewed by		Date
Approved by		Date

- 194 08 150655035
- 194 09 150675000
- 194 10 150894000
- 194 11 150834000
- 194 12 150854001
- 194 13 150864014
- 194 14 150804018
- 194 15 160934107
- 194 16 150724051
- 194 17 150804045
- 194 18 150794057
- 194 19 150944015
- 194 20 160764000
- 194 21 020464000
- 194 22 060184000
- 194 23 070205000
- 194 24 080215000
- 195 01 070145000
- 195 02 080195000
- 195 03 090205000
- 195 04 100185000
- 195 05 100264000
- 195 06 100354000
- 195 07 100404000
- 195 08 100374000
- 195 09 090304000
- 195 10 090344000
- 195 11 080304000
- 195 12 080294000
- 195 13 080384000
- 195 14 080284000
- 195 15 090314000
- 195 16 100374000
- 195 17 100314000
- 195 18 100304000
- 195 19 110225000
- 195 20 110255000
- 195 21 120205000
- 195 22 130145000
- 195 23 140145000
- 195 24 130135000
- 196 01 120095000
- 196 02 120155000
- 196 03 130165000
- 196 04 130195000
- 196 05 130155000
- 196 06 130145000
- 196 07 140234000
- 196 08 150284000
- 196 09 150374000
- 196 10 150473000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-94	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

196 11 150563000
 196 12 150572000
 196 13 150633000
 196 14 150742000
 196 15 150874000
 196 16 130704100
 196 17 110864034
 196 18 140455000
 196 19 140365000
 196 20 010325000
 196 21 090315000
 196 22 090185000
 196 23 050255000
 196 24 050255000
 197 01 050245000
 197 02 040275000
 197 03 040285000
 197 04 040335000
 197 05 040425000
 197 06 040345000
 197 07 030485000
 197 08 040554000
 197 09 040624000
 197 10 050614000
 197 11 050584000
 197 12 050613000
 197 13 050573000
 197 14 050593000
 197 15 050603000
 197 16 050624000
 197 17 040594000
 197 18 040484000
 197 19 040415000
 197 20 050355000
 197 21 040315000
 197 22 040335000
 197 23 040395000
 197 24 050425000
 198 01 040315000
 198 02 030315000
 198 03 030365000
 198 04 030395000
 198 05 030405000
 198 06 030495000
 198 07 040534000
 198 08 040524000
 198 09 050524000
 198 10 060613000
 198 11 050503000
 198 12 050474000
 198 13 050474000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-95	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 198 14 050494000
- 198 15 050424000
- 198 16 050434000
- 198 17 050474000
- 198 18 050404000
- 198 19 050294000
- 198 20 040215000
- 198 21 030255000
- 198 22 030275000
- 198 23 040286000
- 198 24 030256000
- 199 01 040275000
- 199 02 060205000
- 199 03 030115000
- 199 04 020085000
- 199 05 020155000
- 199 06 040105000
- 199 07 070095000
- 199 08 090124000
- 199 09 140104000
- 199 10 160224000
- 199 11 160284000
- 199 12 150274000
- 199 13 150354000
- 199 14 150374000
- 199 15 150455000
- 199 16 120234000
- 199 17 120185000
- 199 18 130165000
- 199 19 150325000
- 199 20 160285000
- 199 21 160355000
- 199 22 010415000
- 199 23 030305000
- 199 24 040255000
- 200 01 040284000
- 200 02 030355000
- 200 03 040265000
- 200 04 160275001
- 200 05 120175003
- 200 06 090205000
- 200 07 100205001
- 200 08 100295036
- 200 09 100255063
- 200 10 100355020
- 200 11 100384061
- 200 12 100284012
- 200 13 100304000
- 200 14 110434000
- 200 15 110424000
- 200 16 110473000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-96	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 200 17 110474006
- 200 18 100434003
- 200 19 100464007
- 200 20 100434000
- 200 21 100374000
- 200 22 100384000
- 200 23 100384000
- 200 24 100344000
- 201 01 090294000
- 201 02 100304000
- 201 03 090244000
- 201 04 080214000
- 201 05 070304000
- 201 06 070234000
- 201 07 070224000
- 201 08 070254000
- 201 09 070264000
- 201 10 070304000
- 201 11 060314000
- 201 12 060184000
- 201 13 020164000
- 201 14 150214000
- 201 15 160164000
- 201 16 070174000
- 201 17 110114000
- 201 18 150174000
- 201 19 150114000
- 201 20 150175000
- 201 21 010454000
- 201 22 010484000
- 201 23 010474000
- 201 24 020355000
- 202 01 030325000
- 202 02 030305000
- 202 03 040245000
- 202 04 060235000
- 202 05 070175000
- 202 06 070215000
- 202 07 070134000
- 202 08 060174000
- 202 09 070254000
- 202 10 060224000
- 202 11 040194000
- 202 12 040213000
- 202 13 050233000
- 202 14 040254000
- 202 15 050214000
- 202 16 050224000
- 202 17 060234000
- 202 18 060264000
- 202 19 060165000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-97	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

202 20 060145000
 202 21 070075000
 202 22 040125000
 202 23 050105000
 202 24 060075000
 203 01 080085000
 203 02 080106000
 203 03 090105000
 203 04 090155000
 203 05 130136000
 203 06 130115000
 203 07 080125000
 203 08 080194000
 203 09 090224000
 203 10 090164000
 203 11 110184000
 203 12 070174000
 203 13 050204000
 203 14 020204000
 203 15 160224000
 203 16 160174000
 203 17 160164000
 203 18 160215000
 203 19 010215000
 203 20 030205000
 203 21 010245000
 203 22 010315000
 203 23 020365000
 203 24 020365000
 204 01 030236000
 204 02 020135000
 204 03 020085000
 204 04 060045000
 204 05 140056000
 204 06 160125000
 204 07 140165000
 204 08 160274000
 204 09 010214000
 204 10 150244000
 204 11 150344000
 204 12 150504000
 204 13 150554000
 204 14 150604000
 204 15 150644000
 204 16 150624000
 204 17 150654000
 204 18 150644000
 204 19 160635000
 204 20 160465000
 204 21 160505000
 204 22 020464000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-98	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 204 23 160254000
- 204 24 160225000
- 205 01 010294000
- 205 02 160304000
- 205 03 010364000
- 205 04 010334000
- 205 05 010304000
- 205 06 010184000
- 205 07 010344000
- 205 08 010354000
- 205 09 010334000
- 205 10 160364000
- 205 11 010294000
- 205 12 160514000
- 205 13 010514000
- 205 14 030554001
- 205 15 030314000
- 205 16 030264000
- 205 17 030244000
- 205 18 010535000
- 205 19 020335000
- 205 20 020295000
- 205 21 030255000
- 205 22 040265000
- 205 23 040255000
- 205 24 040225000
- 206 01 040235000
- 206 02 080125000
- 206 03 100085000
- 206 04 110155000
- 206 05 100345000
- 206 06 100495000
- 206 07 100465000
- 206 08 100524000
- 206 09 100663000
- 206 10 100663000
- 206 11 100563000
- 206 12 100532000
- 206 13 100452000
- 206 14 110492000
- 206 15 100443000
- 206 16 110354000
- 206 17 100374000
- 206 18 100384000
- 206 19 100384000
- 206 20 110295000
- 206 21 110295000
- 206 22 110315000
- 206 23 120305000
- 206 24 120275000
- 207 01 110305000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-99	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 207 02 110354000
- 207 03 110374000
- 207 04 120414000
- 207 05 110384000
- 207 06 110384000
- 207 07 110384000
- 207 08 110424000
- 207 09 110504000
- 207 10 110514000
- 207 11 110494000
- 207 12 110454000
- 207 13 110474000
- 207 14 120454000
- 207 15 110474000
- 207 16 120384000
- 207 17 120314000
- 207 18 120334000
- 207 19 120274000
- 207 20 120195000
- 207 21 120165000
- 207 22 110225000
- 207 23 100225000
- 207 24 100215000
- 208 01 110255000
- 208 02 100205000
- 208 03 080185000
- 208 04 090215000
- 208 05 100255000
- 208 06 100285000
- 208 07 100354000
- 208 08 110274000
- 208 09 120154000
- 208 10 130214000
- 208 11 160213000
- 208 12 030243000
- 208 13 030253000
- 208 14 020233000
- 208 15 160353000
- 208 16 150524000
- 208 17 160564000
- 208 18 160634000
- 208 19 160724000
- 208 20 150514000
- 208 21 140365000
- 208 22 130265000
- 208 23 130264000
- 208 24 140295000
- 209 01 130284000
- 209 02 130224000
- 209 03 140254000
- 209 04 130224000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-100	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

209 05 130234000
 209 06 140324000
 209 07 140404000
 209 08 140424000
 209 09 150774000
 209 10 150784000
 209 11 150733000
 209 12 150682000
 209 13 150604132
 209 14 150564000
 209 15 160513035
 209 16 020424000
 209 17 020184000
 209 18 150305000
 209 19 160364000
 209 20 160384000
 209 21 020434000
 209 22 030384000
 209 23 050394001
 209 24 060174000
 210 01 080115000
 210 02 040124000
 210 03 040174000
 210 04 050154000
 210 05 080084003
 210 06 100074000
 210 07 130044000
 210 08 030084000
 210 09 030084000
 210 10 050114000
 210 11 040104000
 210 12 050124000
 210 13 030174000
 210 14 160194000
 210 15 160254000
 210 16 160464000
 210 17 160464000
 210 18 160514000
 210 19 010364000
 210 20 010314000
 210 21 010174000
 210 22 040104000
 210 23 070175000
 210 24 070165000
 211 01 080235000
 211 02 090235000
 211 03 090135000
 211 04 090115000
 211 05 080125000
 211 06 080175000
 211 07 100185000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-101	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 211 08 100144000
- 211 09 130144000
- 211 10 110144000
- 211 11 030264000
- 211 12 030234000
- 211 13 030243000
- 211 14 010174000
- 211 15 160264000
- 211 16 160184000
- 211 17 010184000
- 211 18 160344000
- 211 19 160594000
- 211 20 160614000
- 211 21 160624000
- 211 22 160464000
- 211 23 160384000
- 211 24 160324000
- 212 01 160244000
- 212 02 150254000
- 212 03 150314000
- 212 04 160404000
- 212 05 010384000
- 212 06 020364000
- 212 07 010394000
- 212 08 020324000
- 212 09 020354000
- 212 10 020424000
- 212 11 020414000
- 212 12 020384000
- 212 13 150504000
- 212 14 150535000
- 212 15 150734000
- 212 16 150684000
- 212 17 150615000
- 212 18 010535000
- 212 19 160645000
- 212 20 160675000
- 212 21 160654000
- 212 22 160684000
- 212 23 160674000
- 212 24 160674000
- 213 01 160554000
- 213 02 010554000
- 213 03 010454000
- 213 04 010384000
- 213 05 010464000
- 213 06 010484000
- 213 07 010514000
- 213 08 010504000
- 213 09 020534000
- 213 10 020544000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-102	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 213 11 020554000
- 213 12 020484000
- 213 13 020574000
- 213 14 020604000
- 213 15 020564000
- 213 16 020534000
- 213 17 160544000
- 213 18 150635000
- 213 19 150685000
- 213 20 160605000
- 213 21 160564000
- 213 22 010534000
- 213 23 010514000
- 213 24 010514000
- 214 01 010414000
- 214 02 160404000
- 214 03 010414000
- 214 04 160444000
- 214 05 010444000
- 214 06 010444000
- 214 07 020424000
- 214 08 030434002
- 214 09 100444001
- 214 10 110284000
- 214 11 160204000
- 214 12 160294000
- 214 13 160384001
- 214 14 160373000
- 214 15 160333000
- 214 16 150324000
- 214 17 160284000
- 214 18 010244000
- 214 19 010304000
- 214 20 010324000
- 214 21 010364000
- 214 22 020254000
- 214 23 040225000
- 214 24 040174000
- 215 01 020144000
- 215 02 010085000
- 215 03 080045000
- 215 04 110085000
- 215 05 120105000
- 215 06 100125000
- 215 07 090084000
- 215 08 110084000
- 215 09 130124000
- 215 10 120134000
- 215 11 160323000
- 215 12 160431000
- 215 13 160492000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-103	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 215 14 160623000
- 215 15 160613000
- 215 16 150654000
- 215 17 150574000
- 215 18 150404000
- 215 19 140295000
- 215 20 150444000
- 215 21 160464000
- 215 22 010364000
- 215 23 020284000
- 215 24 010274000
- 216 01 020214000
- 216 02 040104000
- 216 03 120065000
- 216 04 120054000
- 216 05 140085000
- 216 06 100095000
- 216 07 080074000
- 216 08 070114000
- 216 09 120194000
- 216 10 110184000
- 216 11 140174000
- 216 12 010292000
- 216 13 160381000
- 216 14 160522000
- 216 15 160591000
- 216 16 160623000
- 216 17 160424000
- 216 18 160314000
- 216 19 150134000
- 216 20 100065000
- 216 21 110065000
- 216 22 090085000
- 216 23 050095000
- 216 24 030175000
- 217 01 040185000
- 217 02 040215000
- 217 03 040245000
- 217 04 050215000
- 217 05 060345000
- 217 06 070345000
- 217 07 080305000
- 217 08 080334000
- 217 09 080324000
- 217 10 080364000
- 217 11 090303000
- 217 12 070304000
- 217 13 070334000
- 217 14 070234000
- 217 15 040214000
- 217 16 030244000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-104 of C-173	

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by		Date
Reviewed by		Date
Approved by		Date

- 217 17 030294000
- 217 18 020314000
- 217 19 010275000
- 217 20 010405019
- 217 21 030305001
- 217 22 030374000
- 217 23 040324000
- 217 24 040274000
- 218 01 040265000
- 218 02 060294000
- 218 03 050275004
- 218 04 070275000
- 218 05 080305000
- 218 06 090345000
- 218 07 090464001
- 218 08 090494000
- 218 09 100394000
- 218 10 100404000
- 218 11 100444000
- 218 12 100444000
- 218 13 100424000
- 218 14 100404000
- 218 15 100344000
- 218 16 110194000
- 218 17 130084000
- 218 18 140124000
- 218 19 120085000
- 218 20 100115000
- 218 21 090275000
- 218 22 090275000
- 218 23 090305000
- 218 24 090395000
- 219 01 090495000
- 219 02 090495000
- 219 03 090525000
- 219 04 090455000
- 219 05 090505000
- 219 06 090595000
- 219 07 090454000
- 219 08 090464000
- 219 09 100594000
- 219 10 090623000
- 219 11 090622000
- 219 12 090592000
- 219 13 080572000
- 219 14 080562000
- 219 15 080552000
- 219 16 080614000
- 219 17 070584000
- 219 18 080424000
- 219 19 080455000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-105 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 219 20 080415000
- 219 21 070415000
- 219 22 080425000
- 219 23 080305000
- 219 24 080286000
- 220 01 080295000
- 220 02 080235000
- 220 03 070275000
- 220 04 070315000
- 220 05 070295000
- 220 06 080205000
- 220 07 080275000
- 220 08 090324000
- 220 09 080364000
- 220 10 080463000
- 220 11 080442000
- 220 12 080344000
- 220 13 080394000
- 220 14 070414000
- 220 15 080484000
- 220 16 070504000
- 220 17 070484000
- 220 18 070484000
- 220 19 070395000
- 220 20 070345000
- 220 21 070305000
- 220 22 070285000
- 220 23 070295000
- 220 24 060255000
- 221 01 060245000
- 221 02 050255000
- 221 03 060175000
- 221 04 050205000
- 221 05 050235000
- 221 06 040255000
- 221 07 040245000
- 221 08 040294000
- 221 09 040364000
- 221 10 040424000
- 221 11 040463000
- 221 12 040472000
- 221 13 050463000
- 221 14 050503000
- 221 15 040423000
- 221 16 050404000
- 221 17 060344000
- 221 18 050314000
- 221 19 040325000
- 221 20 030385000
- 221 21 020385000
- 221 22 030415000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-106	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

221 23 030435000
 221 24 040435000
 222 01 040375000
 222 02 040365000
 222 03 040335000
 222 04 040345000
 222 05 050205000
 222 06 050195000
 222 07 050245000
 222 08 060204000
 222 09 060174000
 222 10 070174000
 222 11 040164000
 222 12 030253000
 222 13 020224000
 222 14 030263000
 222 15 030293000
 222 16 030274000
 222 17 030274000
 222 18 030284000
 222 19 030235000
 222 20 030275000
 222 21 020266000
 222 22 030306000
 222 23 020385000
 222 24 020435000
 223 01 020505000
 223 02 020465000
 223 03 030395000
 223 04 030365000
 223 05 030295000
 223 06 020254000
 223 07 010214000
 223 08 010214000
 223 09 020264000
 223 10 020224000
 223 11 010213000
 223 12 020214000
 223 13 160363000
 223 14 010464000
 223 15 020464000
 223 16 020514000
 223 17 020624000
 223 18 020585000
 223 19 010535000
 223 20 010575000
 223 21 010554000
 223 22 010594000
 223 23 010674000
 223 24 020654000
 224 01 020644000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-107 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 224 02 020624000
- 224 03 020554000
- 224 04 020534000
- 224 05 020434000
- 224 06 020344000
- 224 07 020334000
- 224 08 020314000
- 224 09 030373000
- 224 10 020303000
- 224 11 010233000
- 224 12 010253000
- 224 13 010294000
- 224 14 020454000
- 224 15 020514000
- 224 16 020544000
- 224 17 020405000
- 224 18 030525001
- 224 19 020475000
- 224 20 020395000
- 224 21 020404000
- 224 22 020444000
- 224 23 160474000
- 224 24 160464000
- 225 01 160414000
- 225 02 010344000
- 225 03 010314000
- 225 04 160394000
- 225 05 160424000
- 225 06 160334000
- 225 07 160304000
- 225 08 160324000
- 225 09 150334000
- 225 10 150402000
- 225 11 150572000
- 225 12 150693000
- 225 13 150803000
- 225 14 150874000
- 225 15 150894000
- 225 16 150924000
- 225 17 151034000
- 225 18 150864000
- 225 19 150724000
- 225 20 160644000
- 225 21 160664000
- 225 22 160704000
- 225 23 150554000
- 225 24 150674000
- 226 01 150844000
- 226 02 160654000
- 226 03 010564000
- 226 04 020554000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-108	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 226 05 020424000
- 226 06 020474000
- 226 07 020494000
- 226 08 020424000
- 226 09 020474000
- 226 10 020474000
- 226 11 020394000
- 226 12 030344000
- 226 13 040392011
- 226 14 050424000
- 226 15 060374000
- 226 16 060324000
- 226 17 080264000
- 226 18 080174000
- 226 19 070134000
- 226 20 060195000
- 226 21 050215000
- 226 22 060235000
- 226 23 060245000
- 226 24 070345000
- 227 01 070225000
- 227 02 070245000
- 227 03 070265000
- 227 04 070315000
- 227 05 080275000
- 227 06 070255000
- 227 07 070234000
- 227 08 070255000
- 227 09 070234000
- 227 10 080254000
- 227 11 080234000
- 227 12 090124000
- 227 13 060134002
- 227 14 060214004
- 227 15 020184001
- 227 16 040184000
- 227 17 030184004
- 227 18 040154003
- 227 19 090225001
- 227 20 110235002
- 227 21 110295012
- 227 22 120254006
- 227 23 120175007
- 227 24 110094002
- 228 01 100114000
- 228 02 100124000
- 228 03 100094000
- 228 04 060164000
- 228 05 070165000
- 228 06 070135000
- 228 07 050214000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-109 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

228 08 060134000
 228 09 060114000
 228 10 040144000
 228 11 020174000
 228 12 160184000
 228 13 010184000
 228 14 030244000
 228 15 030304000
 228 16 030314000
 228 17 020284000
 228 18 030254000
 228 19 030194000
 228 20 030184000
 228 21 030244000
 228 22 030284000
 228 23 020274000
 228 24 020274000
 229 01 010334000
 229 02 020324000
 229 03 020334000
 229 04 030254002
 229 05 010164012
 229 06 130215004
 229 07 140175002
 229 08 120095000
 229 09 100175000
 229 10 110134000
 229 11 050144000
 229 12 070174000
 229 13 080254000
 229 14 100194000
 229 15 110184000
 229 16 160174000
 229 17 010214000
 229 18 010234000
 229 19 020325000
 229 20 020305000
 229 21 040305000
 229 22 050175000
 229 23 050295000
 229 24 070215000
 230 01 070235000
 230 02 080215000
 230 03 070215000
 230 04 090255000
 230 05 100305000
 230 06 100215000
 230 07 090144000
 230 08 100154000
 230 09 120171000
 230 10 110201000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-110 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

230 11 120134000
 230 12 030234000
 230 13 020194000
 230 14 010204000
 230 15 160184000
 230 16 160344000
 230 17 160344000
 230 18 150564012
 230 19 150485000
 230 20 150594000
 230 21 160614000
 230 22 160524000
 230 23 010584000
 230 24 030435003
 231 01 040225000
 231 02 020385004
 231 03 050185000
 231 04 130165000
 231 05 010344000
 231 06 010344000
 231 07 020324000
 231 08 030284000
 231 09 030254000
 231 10 030274000
 231 11 040174000
 231 12 010164000
 231 13 010204000
 231 14 160403000
 231 15 150464000
 231 16 150384000
 231 17 150304000
 231 18 150244000
 231 19 150545037
 231 20 020175000
 231 21 010375000
 231 22 010515000
 231 23 020464000
 231 24 010464000
 232 01 010504000
 232 02 020524000
 232 03 020454000
 232 04 020434000
 232 05 020424000
 232 06 020304000
 232 07 020354000
 232 08 030334000
 232 09 030404000
 232 10 030294000
 232 11 030304000
 232 12 020384000
 232 13 020283000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	C-111	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

232 14 020364000
 232 15 040374000
 232 16 040324000
 232 17 030294000
 232 18 020235000
 232 19 020295000
 232 20 020215000
 232 21 010214000
 232 22 010245000
 232 23 160325000
 232 24 160404000
 233 01 010374000
 233 02 010294000
 233 03 010304000
 233 04 020244000
 233 05 020245000
 233 06 020255000
 233 07 020254000
 233 08 010204000
 233 09 160174000
 233 10 150274000
 233 11 150384000
 233 12 150455000
 233 13 150505000
 233 14 150546000
 233 15 150546000
 233 16 150556000
 233 17 160456000
 233 18 010465000
 233 19 010455000
 233 20 010475000
 233 21 010515000
 233 22 010554000
 233 23 010585000
 233 24 020625000
 234 01 020624000
 234 02 010624000
 234 03 020664000
 234 04 020634000
 234 05 020594000
 234 06 020624000
 234 07 020664000
 234 08 020574000
 234 09 020604000
 234 10 030574000
 234 11 030574000
 234 12 030604000
 234 13 030574000
 234 14 040634000
 234 15 070504000
 234 16 080384016



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-112 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

234 17 080385000
 234 18 090485000
 234 19 090385000
 234 20 090315000
 234 21 090345000
 234 22 090345000
 234 23 090345000
 234 24 080385000
 235 01 090345000
 235 02 090345000
 235 03 100295000
 235 04 090305000
 235 05 090286000
 235 06 100285000
 235 07 090285000
 235 08 090354000
 235 09 100364000
 235 10 100314000
 235 11 110254000
 235 12 090174000
 235 13 070263000
 235 14 060253000
 235 15 020204000
 235 16 060204000
 235 17 090154000
 235 18 020094000
 235 19 030105000
 235 20 030235000
 235 21 020304000
 235 22 010374000
 235 23 020415000
 235 24 020435000
 236 01 020445000
 236 02 020445000
 236 03 030415000
 236 04 020415000
 236 05 030385000
 236 06 030335000
 236 07 030205000
 236 08 030244000
 236 09 020254000
 236 10 030244000
 236 11 030253000
 236 12 030293000
 236 13 030282000
 236 14 040303000
 236 15 040284000
 236 16 150404000
 236 17 150424000
 236 18 150414000
 236 19 150175000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-113 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 236 20 120095000
- 236 21 050095000
- 236 22 040215000
- 236 23 040245000
- 236 24 030305000
- 237 01 040245000
- 237 02 050115000
- 237 03 040135000
- 237 04 050165000
- 237 05 080175000
- 237 06 060125000
- 237 07 080135000
- 237 08 080154000
- 237 09 110313000
- 237 10 130253000
- 237 11 120233000
- 237 12 120233000
- 237 13 130224000
- 237 14 150384000
- 237 15 140314000
- 237 16 130354000
- 237 17 130284000
- 237 18 140314000
- 237 19 140295000
- 237 20 140375000
- 237 21 140225000
- 237 22 120225000
- 237 23 110235000
- 237 24 110225000
- 238 01 110215000
- 238 02 110205000
- 238 03 110235000
- 238 04 110266000
- 238 05 110265000
- 238 06 110265000
- 238 07 120255000
- 238 08 120324000
- 238 09 130264000
- 238 10 130204000
- 238 11 130174000
- 238 12 150254000
- 238 13 160313000
- 238 14 160492000
- 238 15 160651000
- 238 16 160723000
- 238 17 160744000
- 238 18 160704000
- 238 19 140435000
- 238 20 140355000
- 238 21 130195000
- 238 22 120215000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-114 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

238 23 120255000
 238 24 130216000
 239 01 110256000
 239 02 110236000
 239 03 110196000
 239 04 100186000
 239 05 100206000
 239 06 110166000
 239 07 120146000
 239 08 130174000
 239 09 140274000
 239 10 150392000
 239 11 160491000
 239 12 160471000
 239 13 150521000
 239 14 160551000
 239 15 160581000
 239 16 160622000
 239 17 160633000
 239 18 160724000
 239 19 150724000
 239 20 150654000
 239 21 150425000
 239 22 150554000
 239 23 160614000
 239 24 160534000
 240 01 010264000
 240 02 010284000
 240 03 010254000
 240 04 010134000
 240 05 010214000
 240 06 020134000
 240 07 040174000
 240 08 030204000
 240 09 020194000
 240 10 020183000
 240 11 010181000
 240 12 160243000
 240 13 160334000
 240 14 150414000
 240 15 160633000
 240 16 160673000
 240 17 150684000
 240 18 150704000
 240 19 160524000
 240 20 010385000
 240 21 010345000
 240 22 020355000
 240 23 010444000
 240 24 020454000
 241 01 020444000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-115 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 241 02 020414000
- 241 03 020354000
- 241 04 020344000
- 241 05 030334000
- 241 06 030314000
- 241 07 020294000
- 241 08 030254000
- 241 09 030284000
- 241 10 030303000
- 241 11 020233000
- 241 12 010233000
- 241 13 160324000
- 241 14 150445000
- 241 15 150575000
- 241 16 150594000
- 241 17 150594000
- 241 18 150594000
- 241 19 150455000
- 241 20 010285000
- 241 21 030235000
- 241 22 020325000
- 241 23 020324000
- 241 24 020344000
- 242 01 020304000
- 242 02 020305000
- 242 03 020295000
- 242 04 030204000
- 242 05 030135000
- 242 06 010214000
- 242 07 160314000
- 242 08 160344000
- 242 09 160381000
- 242 10 160381000
- 242 11 150371000
- 242 12 150384000
- 242 13 160364000
- 242 14 150474000
- 242 15 150594000
- 242 16 150673000
- 242 17 150684000
- 242 18 150584000
- 242 19 150585000
- 242 20 160535000
- 242 21 160475000
- 242 22 160384000
- 242 23 160344000
- 242 24 160394000
- 243 01 160324000
- 243 02 160354000
- 243 03 150235000
- 243 04 140195000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-116 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

243 05 120145000
 243 06 120176000
 243 07 120215000
 243 08 130254000
 243 09 130334000
 243 10 130214000
 243 11 130104005
 243 12 130154023
 243 13 120295003
 243 14 140374000
 243 15 150384000
 243 16 160544011
 243 17 150524000
 243 18 160444000
 243 19 120175000
 243 20 130225000
 243 21 120215000
 243 22 110255000
 243 23 110325000
 243 24 100444009
 244 01 100424004
 244 02 100494001
 244 03 090434000
 244 04 090495000
 244 05 080554000
 244 06 080585000
 244 07 080505000
 244 08 070494000
 244 09 080594000
 244 10 080634000
 244 11 070594000
 244 12 070514000
 244 13 070514000
 244 14 070514000
 244 15 070504000
 244 16 070554000
 244 17 070454000
 244 18 070355000
 244 19 080305000
 244 20 080285000
 244 21 070195000
 244 22 060225000
 244 23 070285000
 244 24 090316000
 245 01 090276000
 245 02 090306000
 245 03 090255000
 245 04 090236000
 245 05 080266000
 245 06 090246000
 245 07 090266000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-117 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

245 08 100245000
 245 09 080324000
 245 10 080304000
 245 11 090294000
 245 12 080244000
 245 13 080244000
 245 14 090264000
 245 15 080284000
 245 16 070334000
 245 17 080315000
 245 18 070285000
 245 19 070265000
 245 20 070215000
 245 21 060185000
 245 22 070196000
 245 23 080216000
 245 24 090276000
 246 01 100286000
 246 02 100306000
 246 03 100266000
 246 04 100326000
 246 05 100326000
 246 06 100326000
 246 07 100305000
 246 08 110414000
 246 09 110424000
 246 10 110313000
 246 11 110223000
 246 12 120163000
 246 13 040234000
 246 14 070194000
 246 15 080264000
 246 16 080294000
 246 17 100174000
 246 18 150434000
 246 19 150464000
 246 20 140355000
 246 21 130275000
 246 22 130135000
 246 23 120155000
 246 24 110205000
 247 01 110205000
 247 02 100205000
 247 03 100255000
 247 04 110276000
 247 05 110286000
 247 06 110316000
 247 07 110296000
 247 08 110335000
 247 09 110254000
 247 10 130174000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-118 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 247 11 010184000
- 247 12 010223000
- 247 13 020233000
- 247 14 010184000
- 247 15 160194000
- 247 16 160244000
- 247 17 160314000
- 247 18 150314000
- 247 19 160374000
- 247 20 160334000
- 247 21 140285000
- 247 22 140275000
- 247 23 140226000
- 247 24 130136000
- 248 01 110096000
- 248 02 110156000
- 248 03 110176000
- 248 04 110175000
- 248 05 100205000
- 248 06 110155000
- 248 07 100175000
- 248 08 100135000
- 248 09 090114000
- 248 10 100274000
- 248 11 100264000
- 248 12 100184000
- 248 13 110174000
- 248 14 030213000
- 248 15 020204000
- 248 16 020154000
- 248 17 010144000
- 248 18 160154000
- 248 19 150165000
- 248 20 160135000
- 248 21 090085000
- 248 22 120125000
- 248 23 080146000
- 248 24 120136000
- 249 01 140145000
- 249 02 130116000
- 249 03 120136000
- 249 04 110186000
- 249 05 120246000
- 249 06 110276000
- 249 07 110285000
- 249 08 120364000
- 249 09 120444000
- 249 10 120494000
- 249 11 120573000
- 249 12 120463000
- 249 13 120502000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-119 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 249 14 120543000
- 249 15 120524000
- 249 16 120464000
- 249 17 120374000
- 249 18 120344000
- 249 19 120345000
- 249 20 120375000
- 249 21 110345000
- 249 22 120315000
- 249 23 120255000
- 249 24 110255000
- 250 01 100315000
- 250 02 100415000
- 250 03 110345000
- 250 04 110315000
- 250 05 110345000
- 250 06 110365000
- 250 07 110465000
- 250 08 110514000
- 250 09 110484000
- 250 10 110434000
- 250 11 120393000
- 250 12 130401000
- 250 13 140473000
- 250 14 140414000
- 250 15 140474000
- 250 16 140464000
- 250 17 140424000
- 250 18 130274000
- 250 19 130175000
- 250 20 130165000
- 250 21 120185000
- 250 22 110245000
- 250 23 110235000
- 250 24 100255000
- 251 01 110276000
- 251 02 110275000
- 251 03 110305000
- 251 04 110345000
- 251 05 110325000
- 251 06 120144000
- 251 07 120184000
- 251 08 130184000
- 251 09 120234000
- 251 10 140161000
- 251 11 010202000
- 251 12 020234000
- 251 13 010244000
- 251 14 010302000
- 251 15 160462000
- 251 16 160483000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-120 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

251 17 150454000
 251 18 150454000
 251 19 160394000
 251 20 140245000
 251 21 130215000
 251 22 120135000
 251 23 110255000
 251 24 110235000
 252 01 110135000
 252 02 100165000
 252 03 100215000
 252 04 100245000
 252 05 100225000
 252 06 100195000
 252 07 090134000
 252 08 100134000
 252 09 150103000
 252 10 160261000
 252 11 150421000
 252 12 150542000
 252 13 150642000
 252 14 150664000
 252 15 150644000
 252 16 150724000
 252 17 150654000
 252 18 140584000
 252 19 140544000
 252 20 140644000
 252 21 140664000
 252 22 140724000
 252 23 150864000
 252 24 151014000
 253 01 151044000
 253 02 151094000
 253 03 151004000
 253 04 150934000
 253 05 150945010
 253 06 160764000
 253 07 150874000
 253 08 160895000
 253 09 160784000
 253 10 010754000
 253 11 010924001
 253 12 010904000
 253 13 020924000
 253 14 020674001
 253 15 020844000
 253 16 030724000
 253 17 040524000
 253 18 040514000
 253 19 050514000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
	Safety Related	X Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-121	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

253 20 050474000
 253 21 050465000
 253 22 050485000
 253 23 050425000
 253 24 050424000
 254 01 050344000
 254 02 060315000
 254 03 060295000
 254 04 060345000
 254 05 060305000
 254 06 060235000
 254 07 060274000
 254 08 060354000
 254 09 060384000
 254 10 070393000
 254 11 070393000
 254 12 080373000
 254 13 080304000
 254 14 090284000
 254 15 080304000
 254 16 090254000
 254 17 080274000
 254 18 090215000
 254 19 080275000
 254 20 090276000
 254 21 100265000
 254 22 100196000
 254 23 100175000
 254 24 100116000
 255 01 090186000
 255 02 090246000
 255 03 090286000
 255 04 100326000
 255 05 110326000
 255 06 110305000
 255 07 100225000
 255 08 110235000
 255 09 110284000
 255 10 130244000
 255 11 120264000
 255 12 120234000
 255 13 120214000
 255 14 130174000
 255 15 110204000
 255 16 120214000
 255 17 120244000
 255 18 120235000
 255 19 120215000
 255 20 130165000
 255 21 130185000
 255 22 130175000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-122 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

255 23 130125000
 255 24 110125000
 256 01 110175000
 256 02 090215000
 256 03 100196000
 256 04 100206000
 256 05 100227000
 256 06 110237000
 256 07 100197000
 256 08 080135000
 256 09 100114000
 256 10 010174000
 256 11 040224000
 256 12 060174000
 256 13 020144000
 256 14 010224000
 256 15 160184000
 256 16 160214000
 256 17 160224000
 256 18 160254000
 256 19 160354000
 256 20 010434000
 256 21 010464000
 256 22 020494000
 256 23 020424000
 256 24 030404000
 257 01 030374000
 257 02 040355000
 257 03 060175000
 257 04 060175000
 257 05 050215000
 257 06 060175000
 257 07 060175000
 257 08 080194000
 257 09 080204000
 257 10 080174000
 257 11 090214000
 257 12 090143000
 257 13 090223000
 257 14 070283000
 257 15 080244000
 257 16 080214000
 257 17 080144000
 257 18 090075000
 257 19 060085000
 257 20 160165000
 257 21 140196000
 257 22 020305000
 257 23 020195000
 257 24 010244000
 258 01 030254000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-123 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 258 02 040175000
- 258 03 130175000
- 258 04 130186000
- 258 05 120236000
- 258 06 110255000
- 258 07 110255000
- 258 08 120285000
- 258 09 120234000
- 258 10 140363000
- 258 11 140373000
- 258 12 140314005
- 258 13 130355001
- 258 14 130315000
- 258 15 130254000
- 258 16 140325000
- 258 17 140435000
- 258 18 130265000
- 258 19 130195000
- 258 20 130205000
- 258 21 130175000
- 258 22 120205000
- 258 23 120225000
- 258 24 120245000
- 259 01 120245000
- 259 02 110265000
- 259 03 110305000
- 259 04 110305000
- 259 05 110305000
- 259 06 100335000
- 259 07 100375000
- 259 08 110384000
- 259 09 110364004
- 259 10 110384000
- 259 11 120294000
- 259 12 130204000
- 259 13 120214001
- 259 14 120244000
- 259 15 120234000
- 259 16 110224000
- 259 17 110244000
- 259 18 120294001
- 259 19 110285000
- 259 20 110294000
- 259 21 110284000
- 259 22 110294000
- 259 23 110304000
- 259 24 110304000
- 260 01 110234000
- 260 02 100174000
- 260 03 090154000
- 260 04 100105000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-124 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 260 05 110094000
- 260 06 090114000
- 260 07 110064000
- 260 08 090074000
- 260 09 070104000
- 260 10 050151000
- 260 11 060151000
- 260 12 080224000
- 260 13 080184000
- 260 14 080144000
- 260 15 070184000
- 260 16 050274000
- 260 17 040224000
- 260 18 030204000
- 260 19 020204000
- 260 20 010285000
- 260 21 010405000
- 260 22 010445000
- 260 23 010464000
- 260 24 010395000
- 261 01 020345000
- 261 02 020235000
- 261 03 020255000
- 261 04 020285000
- 261 05 030335000
- 261 06 030235000
- 261 07 020175000
- 261 08 010244000
- 261 09 150264000
- 261 10 150334000
- 261 11 150424000
- 261 12 150574000
- 261 13 150642000
- 261 14 150754000
- 261 15 150854000
- 261 16 150914000
- 261 17 150844000
- 261 18 150814000
- 261 19 150804000
- 261 20 150864000
- 261 21 150894000
- 261 22 150894000
- 261 23 150964000
- 261 24 150904000
- 262 01 150875004
- 262 02 150975002
- 262 03 151255011
- 262 04 161065000
- 262 05 160594000
- 262 06 160594000
- 262 07 160594000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-125 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 262 08 160524000
- 262 09 150454000
- 262 10 090774003
- 262 11 100954000
- 262 12 100974000
- 262 13 100814001
- 262 14 090884009
- 262 15 090794000
- 262 16 090824002
- 262 17 090824000
- 262 18 100684000
- 262 19 100675000
- 262 20 090725001
- 262 21 090675000
- 262 22 090575000
- 262 23 090615000
- 262 24 090595000
- 263 01 090545000
- 263 02 090545000
- 263 03 100435000
- 263 04 100435000
- 263 05 100595000
- 263 06 100505000
- 263 07 090565000
- 263 08 100674000
- 263 09 100674000
- 263 10 090653000
- 263 11 090652000
- 263 12 090601000
- 263 13 090572000
- 263 14 080572000
- 263 15 090523000
- 263 16 090504000
- 263 17 090454000
- 263 18 090345000
- 263 19 090356000
- 263 20 090366000
- 263 21 090336000
- 263 22 100356000
- 263 23 100306000
- 263 24 100326000
- 264 01 100365000
- 264 02 100315000
- 264 03 090325000
- 264 04 090345000
- 264 05 100295000
- 264 06 090315000
- 264 07 090315000
- 264 08 100404000
- 264 09 110454000
- 264 10 110304000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-126 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 264 11 110253000
- 264 12 100214000
- 264 13 090244000
- 264 14 090264000
- 264 15 080294000
- 264 16 090194000
- 264 17 090224000
- 264 18 080135000
- 264 19 060235000
- 264 20 050265000
- 264 21 050295000
- 264 22 050255000
- 264 23 060186000
- 264 24 050266000
- 265 01 060305000
- 265 02 050305000
- 265 03 050255000
- 265 04 060185000
- 265 05 060215000
- 265 06 060245000
- 265 07 070245000
- 265 08 070215000
- 265 09 060194000
- 265 10 060204000
- 265 11 070234000
- 265 12 070284000
- 265 13 080214000
- 265 14 090164000
- 265 15 080254000
- 265 16 090264000
- 265 17 080184000
- 265 18 070215000
- 265 19 050245000
- 265 20 060226000
- 265 21 050186000
- 265 22 050206000
- 265 23 060207000
- 265 24 060256000
- 266 01 070257000
- 266 02 070257000
- 266 03 070217000
- 266 04 060247000
- 266 05 070297000
- 266 06 070226000
- 266 07 070316000
- 266 08 080255000
- 266 09 080345000
- 266 10 090344000
- 266 11 080373000
- 266 12 080334000
- 266 13 090354000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-127 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

266 14 090384000
 266 15 080334000
 266 16 070384000
 266 17 060374000
 266 18 060345000
 266 19 060345000
 266 20 070386000
 266 21 070326000
 266 22 060346000
 266 23 070356000
 266 24 080317000
 267 01 090317000
 267 02 080347000
 267 03 080316000
 267 04 090256000
 267 05 090316000
 267 06 070236000
 267 07 070255000
 267 08 080255000
 267 09 080254000
 267 10 100434000
 267 11 100344000
 267 12 100313000
 267 13 110373000
 267 14 110263000
 267 15 100314000
 267 16 090384000
 267 17 090305000
 267 18 150365000
 267 19 160375000
 267 20 160384000
 267 21 010305000
 267 22 010275000
 267 23 160235000
 267 24 110176000
 268 01 100146000
 268 02 110156000
 268 03 110216000
 268 04 110216000
 268 05 110146000
 268 06 100196000
 268 07 100196000
 268 08 120146000
 268 09 140144000
 268 10 010204000
 268 11 010283000
 268 12 010351000
 268 13 160321000
 268 14 160431000
 268 15 150592000
 268 16 150583000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-128	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 268 17 160584000
- 268 18 160604000
- 268 19 160534000
- 268 20 150455000
- 268 21 140325000
- 268 22 140315000
- 268 23 140246000
- 268 24 140206000
- 269 01 130146000
- 269 02 140096000
- 269 03 110085000
- 269 04 100125000
- 269 05 090145000
- 269 06 110186000
- 269 07 110146000
- 269 08 100095000
- 269 09 050134000
- 269 10 020174000
- 269 11 020214000
- 269 12 020214000
- 269 13 010242000
- 269 14 160264000
- 269 15 160274000
- 269 16 160304000
- 269 17 150245000
- 269 18 160354000
- 269 19 010324000
- 269 20 010375000
- 269 21 010464000
- 269 22 020455000
- 269 23 020415000
- 269 24 030314000
- 270 01 030255000
- 270 02 030225000
- 270 03 030255000
- 270 04 030235000
- 270 05 050135000
- 270 06 080155000
- 270 07 080175000
- 270 08 080114000
- 270 09 090214000
- 270 10 110314000
- 270 11 100324000
- 270 12 100344000
- 270 13 100264000
- 270 14 090284000
- 270 15 080314000
- 270 16 080264000
- 270 17 080175000
- 270 18 070095000
- 270 19 060045000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-129 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

270 20 070135000
 270 21 160095000
 270 22 160075000
 270 23 090116000
 270 24 100156000
 271 01 090106000
 271 02 090136000
 271 03 100206000
 271 04 100246000
 271 05 100257000
 271 06 110237000
 271 07 110197000
 271 08 120096000
 271 09 130154000
 271 10 140264000
 271 11 160371000
 271 12 160522000
 271 13 150421000
 271 14 160392000
 271 15 150424000
 271 16 160414000
 271 17 160414000
 271 18 150215000
 271 19 140205000
 271 20 130135000
 271 21 120165000
 271 22 130175000
 271 23 130175000
 271 24 130225000
 272 01 130235005
 272 02 140245000
 272 03 150275000
 272 04 150344000
 272 05 150264000
 272 06 150325000
 272 07 150424017
 272 08 150374002
 272 09 150414000
 272 10 150365000
 272 11 150335000
 272 12 150314000
 272 13 140324000
 272 14 130414031
 272 15 140634028
 272 16 150684000
 272 17 150714003
 272 18 140664016
 272 19 130424051
 272 20 140544038
 272 21 110734049
 272 22 101014006



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-130 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

272 23 101024004
 272 24 100924006
 273 01 100774002
 273 02 090654001
 273 03 080684000
 273 04 090724000
 273 05 080685000
 273 06 090675000
 273 07 090605000
 273 08 090594000
 273 09 090524000
 273 10 090594000
 273 11 090534000
 273 12 090494000
 273 13 090514000
 273 14 090424000
 273 15 100374000
 273 16 100294000
 273 17 110174000
 273 18 120144000
 273 19 140155001
 273 20 140265000
 273 21 130175000
 273 22 140195000
 273 23 130145000
 273 24 140185000
 274 01 140225000
 274 02 130145000
 274 03 120135000
 274 04 130095000
 274 05 140185000
 274 06 140245000
 274 07 140185000
 274 08 150195000
 274 09 010324000
 274 10 020304001
 274 11 020254001
 274 12 030184000
 274 13 030184000
 274 14 030184000
 274 15 010224000
 274 16 160294000
 274 17 150244000
 274 18 160214000
 274 19 100095000
 274 20 080255000
 274 21 080216000
 274 22 100136000
 274 23 090165000
 274 24 110155000
 275 01 100255000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-131	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 275 02 110226000
- 275 03 080095000
- 275 04 070125000
- 275 05 060125000
- 275 06 070175000
- 275 07 070205000
- 275 08 080135000
- 275 09 100084000
- 275 10 020134000
- 275 11 020214000
- 275 12 160204000
- 275 13 160184000
- 275 14 160254000
- 275 15 160344000
- 275 16 160404000
- 275 17 160374000
- 275 18 160394000
- 275 19 010374000
- 275 20 160475000
- 275 21 160574000
- 275 22 160534000
- 275 23 160424000
- 275 24 160444000
- 276 01 010474000
- 276 02 160454000
- 276 03 160444000
- 276 04 160424000
- 276 05 010424000
- 276 06 160464000
- 276 07 160434000
- 276 08 070185004
- 276 09 010345010
- 276 10 160514001
- 276 11 150484000
- 276 12 150634000
- 276 13 150624000
- 276 14 160614000
- 276 15 160484000
- 276 16 160394000
- 276 17 150354000
- 276 18 110125000
- 276 19 100135000
- 276 20 100105000
- 276 21 090156000
- 276 22 090146000
- 276 23 130105000
- 276 24 060215000
- 277 01 070295000
- 277 02 080315000
- 277 03 090485000
- 277 04 090435000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-132 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 277 05 090365000
- 277 06 090385000
- 277 07 090405000
- 277 08 090484000
- 277 09 100504000
- 277 10 100514000
- 277 11 100404000
- 277 12 100313000
- 277 13 090224000
- 277 14 080213000
- 277 15 060134000
- 277 16 060134000
- 277 17 160094000
- 277 18 150104000
- 277 19 160175000
- 277 20 020265000
- 277 21 020335000
- 277 22 020365000
- 277 23 020365000
- 277 24 020375000
- 278 01 020285000
- 278 02 110086000
- 278 03 070085000
- 278 04 070045000
- 278 05 020195000
- 278 06 030235000
- 278 07 040165000
- 278 08 040214000
- 278 09 030174000
- 278 10 030293000
- 278 11 040253000
- 278 12 030252000
- 278 13 030302000
- 278 14 030312000
- 278 15 030313000
- 278 16 030354000
- 278 17 040294000
- 278 18 030265000
- 278 19 030265000
- 278 20 020305000
- 278 21 020345000
- 278 22 020385000
- 278 23 040405000
- 278 24 080575000
- 279 01 100505000
- 279 02 090395000
- 279 03 090425000
- 279 04 090465000
- 279 05 090395000
- 279 06 090365000
- 279 07 090355000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-133 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

279 08 090504000
 279 09 100584000
 279 10 100623000
 279 11 100562000
 279 12 100442000
 279 13 080412000
 279 14 080382000
 279 15 080343000
 279 16 090314000
 279 17 090274000
 279 18 090205000
 279 19 090175000
 279 20 100156000
 279 21 100096000
 279 22 080195000
 279 23 090215000
 279 24 090295000
 280 01 090236000
 280 02 100246000
 280 03 090346000
 280 04 100326000
 280 05 090186000
 280 06 100175000
 280 07 100206000
 280 08 100205000
 280 09 110194000
 280 10 100214000
 280 11 090233000
 280 12 090243000
 280 13 060213000
 280 14 050233000
 280 15 030234000
 280 16 030264000
 280 17 040284000
 280 18 030324000
 280 19 030285000
 280 20 030265000
 280 21 040305000
 280 22 040326000
 280 23 040346000
 280 24 040316000
 281 01 040196000
 281 02 050075000
 281 03 070085000
 281 04 070135000
 281 05 060176000
 281 06 050206000
 281 07 060205000
 281 08 060225000
 281 09 070224000
 281 10 070214000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-134 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 281 11 080244000
- 281 12 050194000
- 281 13 020164000
- 281 14 040204000
- 281 15 050213000
- 281 16 050244000
- 281 17 040194000
- 281 18 010215000
- 281 19 010196000
- 281 20 010146000
- 281 21 020125000
- 281 22 050146000
- 281 23 070115000
- 281 24 060086000
- 282 01 050066000
- 282 02 090056000
- 282 03 070066000
- 282 04 070086000
- 282 05 100086000
- 282 06 120056000
- 282 07 150076000
- 282 08 030095000
- 282 09 010115000
- 282 10 160165000
- 282 11 150305000
- 282 12 150354000
- 282 13 150374000
- 282 14 150384000
- 282 15 150485000
- 282 16 150505000
- 282 17 150544000
- 282 18 160574000
- 282 19 160564000
- 282 20 020295000
- 282 21 160315000
- 282 22 160434000
- 282 23 010385000
- 282 24 010344000
- 283 01 010324000
- 283 02 010325000
- 283 03 010345000
- 283 04 010335000
- 283 05 010335000
- 283 06 010305000
- 283 07 010265000
- 283 08 010295000
- 283 09 010314000
- 283 10 020274000
- 283 11 030234000
- 283 12 030194000
- 283 13 030233000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	C-135 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 283 14 150264000
- 283 15 150304000
- 283 16 150434000
- 283 17 160424000
- 283 18 160365000
- 283 19 010335000
- 283 20 020275000
- 283 21 030275000
- 283 22 030305000
- 283 23 030295000
- 283 24 030285000
- 284 01 030275000
- 284 02 030235000
- 284 03 060195000
- 284 04 070195000
- 284 05 070245000
- 284 06 080276000
- 284 07 090285000
- 284 08 090295000
- 284 09 090365000
- 284 10 080423000
- 284 11 080472000
- 284 12 090463000
- 284 13 080552000
- 284 14 080582000
- 284 15 070633000
- 284 16 070634000
- 284 17 080664000
- 284 18 080655000
- 284 19 080615000
- 284 20 080674000
- 284 21 090624000
- 284 22 090734000
- 284 23 090644000
- 284 24 090705000
- 285 01 090575000
- 285 02 090595000
- 285 03 090515000
- 285 04 090515000
- 285 05 080495000
- 285 06 080425000
- 285 07 090535000
- 285 08 090604000
- 285 09 090574000
- 285 10 080592000
- 285 11 080603000
- 285 12 080602000
- 285 13 080512000
- 285 14 090462000
- 285 15 090483000
- 285 16 090464000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-136 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

285 17 090344000
 285 18 090265000
 285 19 100346000
 285 20 090336000
 285 21 090345000
 285 22 090405000
 285 23 080415000
 285 24 070395000
 286 01 070375000
 286 02 070365000
 286 03 070345000
 286 04 070315000
 286 05 070305000
 286 06 070395000
 286 07 070465000
 286 08 070544000
 286 09 070513000
 286 10 080522000
 286 11 070521000
 286 12 070521000
 286 13 070491000
 286 14 070491000
 286 15 070462000
 286 16 070424000
 286 17 070414000
 286 18 060405000
 286 19 050325000
 286 20 050365000
 286 21 060415000
 286 22 070325000
 286 23 070335000
 286 24 070255000
 287 01 070175000
 287 02 040255000
 287 03 060205000
 287 04 060225000
 287 05 060245000
 287 06 070186000
 287 07 070206000
 287 08 090155000
 287 09 100174000
 287 10 050154000
 287 11 160134000
 287 12 150154000
 287 13 150164000
 287 14 160244000
 287 15 160204000
 287 16 130104000
 287 17 150164000
 287 18 120165000
 287 19 140175000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-137 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

287 20 130216000
 287 21 110256000
 287 22 110256000
 287 23 110206000
 287 24 100256000
 288 01 110266000
 288 02 120216007
 288 03 100205001
 288 04 090235002
 288 05 090295000
 288 06 090344000
 288 07 090384000
 288 08 100374000
 288 09 090314000
 288 10 080384000
 288 11 080364000
 288 12 080394000
 288 13 080374000
 288 14 090374000
 288 15 080284000
 288 16 090234000
 288 17 100174000
 288 18 100135000
 288 19 080135000
 288 20 100155000
 288 21 100155000
 288 22 120145000
 288 23 140095000
 288 24 130075000
 289 01 160194000
 289 02 020224000
 289 03 020194000
 289 04 150195000
 289 05 150275000
 289 06 140335000
 289 07 150385000
 289 08 160534000
 289 09 150634000
 289 10 150724000
 289 11 150724000
 289 12 150624000
 289 13 160604000
 289 14 010594000
 289 15 160643006
 289 16 160891000
 289 17 160854000
 289 18 010564004
 289 19 030334000
 289 20 050464000
 289 21 070575001
 289 22 060395000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-138	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

289 23 050425000
 289 24 050435000
 290 01 050435000
 290 02 040515000
 290 03 040505000
 290 04 030564000
 290 05 030554000
 290 06 030574000
 290 07 030524000
 290 08 030494000
 290 09 030504000
 290 10 030593000
 290 11 030682000
 290 12 030633000
 290 13 030714000
 290 14 030724000
 290 15 030524000
 290 16 030614000
 290 17 050405006
 290 18 050694002
 290 19 040444002
 290 20 050515000
 290 21 050465000
 290 22 040515000
 290 23 040555000
 290 24 040525000
 291 01 040465000
 291 02 040395000
 291 03 030515000
 291 04 030475000
 291 05 030465000
 291 06 030425000
 291 07 030505000
 291 08 030524000
 291 09 040524000
 291 10 040783000
 291 11 040802000
 291 12 050711000
 291 13 050661000
 291 14 050682000
 291 15 050613000
 291 16 050594000
 291 17 050464000
 291 18 060305000
 291 19 060305000
 291 20 100295000
 291 21 110145000
 291 22 110175000
 291 23 110195000
 291 24 130185000
 292 01 140135000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-139 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 292 02 080055000
- 292 03 070135000
- 292 04 090085000
- 292 05 060205000
- 292 06 070135000
- 292 07 070125000
- 292 08 070115000
- 292 09 090234000
- 292 10 080304000
- 292 11 080194000
- 292 12 020194000
- 292 13 160194000
- 292 14 160214000
- 292 15 150412000
- 292 16 150423000
- 292 17 150514000
- 292 18 140395000
- 292 19 140305000
- 292 20 140265000
- 292 21 140256000
- 292 22 130156000
- 292 23 120216003
- 292 24 120305016
- 293 01 130295024
- 293 02 110325035
- 293 03 110404002
- 293 04 120384013
- 293 05 110304001
- 293 06 110344000
- 293 07 110354000
- 293 08 110334000
- 293 09 100304000
- 293 10 100384000
- 293 11 100414000
- 293 12 100404004
- 293 13 100434000
- 293 14 110474000
- 293 15 110424000
- 293 16 110494007
- 293 17 110474003
- 293 18 110464000
- 293 19 110454000
- 293 20 110474000
- 293 21 110514000
- 293 22 110464000
- 293 23 110414000
- 293 24 110444000
- 294 01 100494000
- 294 02 100544000
- 294 03 100544000
- 294 04 100464000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-140 of C-173	

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by		Date
Reviewed by		Date
Approved by		Date

- 294 05 100424000
- 294 06 100384000
- 294 07 100424000
- 294 08 100424000
- 294 09 100464000
- 294 10 100394000
- 294 11 100444000
- 294 12 110384000
- 294 13 110354000
- 294 14 110364000
- 294 15 100394000
- 294 16 100374000
- 294 17 100334000
- 294 18 100354000
- 294 19 100294000
- 294 20 100285000
- 294 21 100315000
- 294 22 100315000
- 294 23 100305000
- 294 24 110265000
- 295 01 110245000
- 295 02 100304005
- 295 03 100364000
- 295 04 100384000
- 295 05 100404000
- 295 06 110414000
- 295 07 110364000
- 295 08 110374000
- 295 09 110344000
- 295 10 110314000
- 295 11 110414000
- 295 12 110384000
- 295 13 110344000
- 295 14 110384000
- 295 15 110394000
- 295 16 110374000
- 295 17 110344000
- 295 18 110304000
- 295 19 110304000
- 295 20 110314000
- 295 21 110354000
- 295 22 100394000
- 295 23 110384000
- 295 24 110404000
- 296 01 100394000
- 296 02 100404000
- 296 03 100434000
- 296 04 110454000
- 296 05 100434000
- 296 06 100394000
- 296 07 110484000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-141	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 296 08 100494000
- 296 09 100464000
- 296 10 100504000
- 296 11 100443000
- 296 12 100453000
- 296 13 100513000
- 296 14 110454000
- 296 15 110424000
- 296 16 110374000
- 296 17 110315000
- 296 18 100195000
- 296 19 100225000
- 296 20 090215000
- 296 21 090235000
- 296 22 100285000
- 296 23 100315000
- 296 24 100345000
- 297 01 090305000
- 297 02 090305000
- 297 03 090316000
- 297 04 100365000
- 297 05 100345000
- 297 06 100275000
- 297 07 100385000
- 297 08 110544000
- 297 09 110554000
- 297 10 110543000
- 297 11 110492000
- 297 12 110402000
- 297 13 100323000
- 297 14 090353000
- 297 15 100334000
- 297 16 110294000
- 297 17 110225000
- 297 18 120215000
- 297 19 120215000
- 297 20 120205000
- 297 21 120276000
- 297 22 110286000
- 297 23 110286000
- 297 24 110325000
- 298 01 110305000
- 298 02 110275000
- 298 03 110285000
- 298 04 110286000
- 298 05 110285000
- 298 06 120255000
- 298 07 110205000
- 298 08 110295000
- 298 09 100274000
- 298 10 110334000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-142 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 298 11 110294000
- 298 12 120274000
- 298 13 120204000
- 298 14 110134000
- 298 15 090144000
- 298 16 090214000
- 298 17 090144000
- 298 18 080114000
- 298 19 090145000
- 298 20 090135000
- 298 21 110125000
- 298 22 120125000
- 298 23 090105000
- 298 24 110095000
- 299 01 110155000
- 299 02 110135000
- 299 03 110115000
- 299 04 100175000
- 299 05 090135000
- 299 06 100185000
- 299 07 110175000
- 299 08 100144000
- 299 09 090124000
- 299 10 070194000
- 299 11 060254000
- 299 12 080233000
- 299 13 090243000
- 299 14 090294000
- 299 15 080254000
- 299 16 080144000
- 299 17 100074000
- 299 18 060094000
- 299 19 050204000
- 299 20 070304000
- 299 21 070274000
- 299 22 080195000
- 299 23 080205000
- 299 24 080155000
- 300 01 080205000
- 300 02 070215000
- 300 03 070225000
- 300 04 090215000
- 300 05 090175000
- 300 06 080185000
- 300 07 070295000
- 300 08 080255000
- 300 09 080364000
- 300 10 080453000
- 300 11 100424000
- 300 12 100424000
- 300 13 100334000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-143 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 300 14 100254000
- 300 15 100224000
- 300 16 080334000
- 300 17 080315000
- 300 18 080265000
- 300 19 090265000
- 300 20 080325000
- 300 21 080305000
- 300 22 070275000
- 300 23 070265000
- 300 24 070305000
- 301 01 070315000
- 301 02 080326000
- 301 03 080316000
- 301 04 070315000
- 301 05 080265000
- 301 06 080265000
- 301 07 090275000
- 301 08 090225000
- 301 09 090214000
- 301 10 080284000
- 301 11 080273000
- 301 12 090313000
- 301 13 100353000
- 301 14 100344000
- 301 15 100344000
- 301 16 100304000
- 301 17 110175000
- 301 18 100135000
- 301 19 080155000
- 301 20 100136000
- 301 21 140075000
- 301 22 060165000
- 301 23 060186000
- 301 24 070216000
- 302 01 080235000
- 302 02 090245000
- 302 03 110296000
- 302 04 110276000
- 302 05 110306000
- 302 06 100275000
- 302 07 100265000
- 302 08 110315000
- 302 09 110414000
- 302 10 110453000
- 302 11 120263000
- 302 12 120184000
- 302 13 030233000
- 302 14 040223000
- 302 15 040234000
- 302 16 010194000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-144 of C-173	

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

- 302 17 150444000
- 302 18 150534000
- 302 19 150425000
- 302 20 140335000
- 302 21 140245000
- 302 22 140275000
- 302 23 140305000
- 302 24 140295000
- 303 01 160175000
- 303 02 020234000
- 303 03 010364000
- 303 04 010364000
- 303 05 160354000
- 303 06 010314000
- 303 07 010304000
- 303 08 160334000
- 303 09 160344000
- 303 10 010354000
- 303 11 160434000
- 303 12 010384000
- 303 13 020324000
- 303 14 160224000
- 303 15 150244000
- 303 16 140214000
- 303 17 140225000
- 303 18 150325000
- 303 19 160394000
- 303 20 010414000
- 303 21 010444000
- 303 22 010354000
- 303 23 010414000
- 303 24 010384000
- 304 01 160404000
- 304 02 160394000
- 304 03 010264005
- 304 04 160184004
- 304 05 160384001
- 304 06 160434000
- 304 07 160274012
- 304 08 160354000
- 304 09 010314000
- 304 10 010304000
- 304 11 020254000
- 304 12 020234000
- 304 13 010245000
- 304 14 010195000
- 304 15 150255000
- 304 16 150315000
- 304 17 150346000
- 304 18 160275000
- 304 19 150395000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-145 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 304 20 150405000
- 304 21 150435000
- 304 22 150446000
- 304 23 160326000
- 304 24 030266000
- 305 01 040286000
- 305 02 030286000
- 305 03 030296000
- 305 04 030256000
- 305 05 030346000
- 305 06 030315000
- 305 07 030256000
- 305 08 040266000
- 305 09 040305000
- 305 10 040375000
- 305 11 040495000
- 305 12 050654000
- 305 13 050634000
- 305 14 040544000
- 305 15 040555000
- 305 16 040455000
- 305 17 040365000
- 305 18 050435000
- 305 19 050366000
- 305 20 050365000
- 305 21 060346000
- 305 22 060385000
- 305 23 060345000
- 305 24 060386000
- 306 01 050385000
- 306 02 050336000
- 306 03 060345000
- 306 04 060345000
- 306 05 060345000
- 306 06 060395000
- 306 07 060315000
- 306 08 060354000
- 306 09 060384000
- 306 10 060424000
- 306 11 070452000
- 306 12 070471000
- 306 13 070422000
- 306 14 070412000
- 306 15 070374000
- 306 16 070304000
- 306 17 080225000
- 306 18 080255000
- 306 19 100186000
- 306 20 090156000
- 306 21 090136000
- 306 22 090106000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-146 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 306 23 120076000
- 306 24 120186000
- 307 01 120276000
- 307 02 120175000
- 307 03 120125000
- 307 04 100125000
- 307 05 110145000
- 307 06 110305000
- 307 07 110276000
- 307 08 110266000
- 307 09 130204000
- 307 10 140324000
- 307 11 140443000
- 307 12 150561000
- 307 13 150623000
- 307 14 150614000
- 307 15 150544000
- 307 16 150484000
- 307 17 150385000
- 307 18 140305000
- 307 19 140345000
- 307 20 150265000
- 307 21 150286000
- 307 22 150336000
- 307 23 080166000
- 307 24 080146000
- 308 01 040186000
- 308 02 040236000
- 308 03 050315000
- 308 04 040365000
- 308 05 050405000
- 308 06 070545000
- 308 07 080795000
- 308 08 080804000
- 308 09 080724000
- 308 10 080693000
- 308 11 080662000
- 308 12 080652000
- 308 13 080601000
- 308 14 080562000
- 308 15 080534000
- 308 16 080424000
- 308 17 090275000
- 308 18 090266000
- 308 19 090256000
- 308 20 100236000
- 308 21 090185000
- 308 22 090205000
- 308 23 090215000
- 308 24 090306000
- 309 01 090336000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-147 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 309 02 100316000
- 309 03 100175000
- 309 04 110285000
- 309 05 110305000
- 309 06 110335000
- 309 07 120215000
- 309 08 120115000
- 309 09 110114000
- 309 10 110115000
- 309 11 110125006
- 309 12 110105007
- 309 13 100095017
- 309 14 060125013
- 309 15 140185005
- 309 16 150744012
- 309 17 150804005
- 309 18 150534012
- 309 19 070264032
- 309 20 070174006
- 309 21 050274000
- 309 22 040364000
- 309 23 040554000
- 309 24 040534000
- 310 01 040554000
- 310 02 050625000
- 310 03 050595000
- 310 04 050665000
- 310 05 060655000
- 310 06 061005000
- 310 07 060665000
- 310 08 060664000
- 310 09 060734000
- 310 10 070864000
- 310 11 070843000
- 310 12 060772000
- 310 13 060812000
- 310 14 060743000
- 310 15 060664000
- 310 16 060644000
- 310 17 060564000
- 310 18 060415000
- 310 19 050315000
- 310 20 050305000
- 310 21 050345000
- 310 22 050405000
- 310 23 050345000
- 310 24 050345000
- 311 01 050385000
- 311 02 050345000
- 311 03 050375000
- 311 04 050385000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-148 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 311 05 050415000
- 311 06 050395000
- 311 07 040365000
- 311 08 030355000
- 311 09 040594000
- 311 10 040693000
- 311 11 040763000
- 311 12 040782000
- 311 13 030743000
- 311 14 040673000
- 311 15 040664000
- 311 16 040624000
- 311 17 030525000
- 311 18 020445000
- 311 19 020415000
- 311 20 010375000
- 311 21 020385000
- 311 22 030335000
- 311 23 030335000
- 311 24 040335000
- 312 01 040375000
- 312 02 040346000
- 312 03 040326000
- 312 04 040296000
- 312 05 030256000
- 312 06 030216000
- 312 07 050116000
- 312 08 030235000
- 312 09 010175000
- 312 10 150305000
- 312 11 150375000
- 312 12 150375000
- 312 13 010345000
- 312 14 020455000
- 312 15 020555000
- 312 16 020485000
- 312 17 020435000
- 312 18 020395000
- 312 19 010375000
- 312 20 160275000
- 312 21 160305000
- 312 22 020316000
- 312 23 040425000
- 312 24 050375000
- 313 01 050416000
- 313 02 060445000
- 313 03 070675000
- 313 04 080745000
- 313 05 080695000
- 313 06 080565000
- 313 07 080635000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-149 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 313 08 080625000
- 313 09 080604000
- 313 10 080584000
- 313 11 080673000
- 313 12 080631000
- 313 13 080601000
- 313 14 070594000
- 313 15 070664000
- 313 16 070514000
- 313 17 070415000
- 313 18 080485000
- 313 19 080425000
- 313 20 080325000
- 313 21 090265000
- 313 22 080205000
- 313 23 090175000
- 313 24 070295000
- 314 01 070295000
- 314 02 070405000
- 314 03 070395000
- 314 04 070365000
- 314 05 070415000
- 314 06 080455000
- 314 07 100335000
- 314 08 100345000
- 314 09 090514000
- 314 10 080552000
- 314 11 080582000
- 314 12 080612000
- 314 13 080542000
- 314 14 080505000
- 314 15 080527000
- 314 16 080557000
- 314 17 090475000
- 314 18 080405000
- 314 19 100335000
- 314 20 110215000
- 314 21 110245000
- 314 22 110225000
- 314 23 110205000
- 314 24 110235000
- 315 01 110246000
- 315 02 110176000
- 315 03 110176000
- 315 04 120145000
- 315 05 120235000
- 315 06 110276000
- 315 07 110246000
- 315 08 110206000
- 315 09 120204000
- 315 10 130114000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-150	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

315 11 160223000
 315 12 160252016
 315 13 150331000
 315 14 150381000
 315 15 150382000
 315 16 150424000
 315 17 160444000
 315 18 160624000
 315 19 160634000
 315 20 010704000
 315 21 010634000
 315 22 010604000
 315 23 010604000
 315 24 010644000
 316 01 010604000
 316 02 010624000
 316 03 010574000
 316 04 010554000
 316 05 010554000
 316 06 010534000
 316 07 020434000
 316 08 020444000
 316 09 020484000
 316 10 020514000
 316 11 020474000
 316 12 020403000
 316 13 020343000
 316 14 020354000
 316 15 020334000
 316 16 030304000
 316 17 030255000
 316 18 010205000
 316 19 030205000
 316 20 030195000
 316 21 090136000
 316 22 130216000
 316 23 160165000
 316 24 120196000
 317 01 110236000
 317 02 100247000
 317 03 110176000
 317 04 110295000
 317 05 110295000
 317 06 110345000
 317 07 110355000
 317 08 110354004
 317 09 100384009
 317 10 110474010
 317 11 110514009
 317 12 100484018
 317 13 110564006



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-151	of C-173

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by		Date
Reviewed by		Date
Approved by		Date

- 317 14 110544005
- 317 15 110514007
- 317 16 110554007
- 317 17 110554004
- 317 18 100504004
- 317 19 100594003
- 317 20 100544008
- 317 21 100674012
- 317 22 110644009
- 317 23 100614010
- 317 24 100604009
- 318 01 100664006
- 318 02 100694005
- 318 03 100704003
- 318 04 100674000
- 318 05 090654000
- 318 06 090604000
- 318 07 100574000
- 318 08 100604000
- 318 09 100634000
- 318 10 100644000
- 318 11 090624000
- 318 12 090634000
- 318 13 090733000
- 318 14 090674000
- 318 15 090664000
- 318 16 080594000
- 318 17 090555000
- 318 18 090465000
- 318 19 090445000
- 318 20 090425000
- 318 21 090535000
- 318 22 090465000
- 318 23 090495000
- 318 24 090525000
- 319 01 090455000
- 319 02 090445000
- 319 03 090415000
- 319 04 090445000
- 319 05 090495000
- 319 06 090555000
- 319 07 090505000
- 319 08 090475000
- 319 09 090524000
- 319 10 090484000
- 319 11 090514000
- 319 12 080454000
- 319 13 080424000
- 319 14 080404000
- 319 15 080384000
- 319 16 070384000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-152 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 319 17 070455000
- 319 18 070365000
- 319 19 060305000
- 319 20 060335000
- 319 21 060325000
- 319 22 070295000
- 319 23 060315000
- 319 24 060305000
- 320 01 060355000
- 320 02 070335000
- 320 03 070355000
- 320 04 070355000
- 320 05 060345000
- 320 06 070375000
- 320 07 070326000
- 320 08 070335000
- 320 09 070324000
- 320 10 060354000
- 320 11 080333000
- 320 12 080253000
- 320 13 060214000
- 320 14 040224000
- 320 15 070394000
- 320 16 070314000
- 320 17 060255000
- 320 18 060305000
- 320 19 060345000
- 320 20 070346000
- 320 21 070266000
- 320 22 050156000
- 320 23 050226000
- 320 24 060346000
- 321 01 070346000
- 321 02 070347000
- 321 03 070166000
- 321 04 060286000
- 321 05 070246000
- 321 06 080316000
- 321 07 080286000
- 321 08 090257000
- 321 09 090095000
- 321 10 070214000
- 321 11 070253000
- 321 12 060234000
- 321 13 060184000
- 321 14 020154000
- 321 15 160135000
- 321 16 150165000
- 321 17 160146000
- 321 18 030125000
- 321 19 060156000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-153	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 321 20 060206000
- 321 21 050146000
- 321 22 030117000
- 321 23 060097000
- 321 24 100047000
- 322 01 080147000
- 322 02 070217000
- 322 03 070307000
- 322 04 080347000
- 322 05 080276000
- 322 06 070286000
- 322 07 090256000
- 322 08 090226000
- 322 09 080245000
- 322 10 080304000
- 322 11 080324000
- 322 12 080304000
- 322 13 090333000
- 322 14 090314000
- 322 15 090214000
- 322 16 080124000
- 322 17 060175000
- 322 18 060205000
- 322 19 060145000
- 322 20 040095000
- 322 21 040136000
- 322 22 030126000
- 322 23 150166000
- 322 24 020136000
- 323 01 020136000
- 323 02 030166000
- 323 03 030156000
- 323 04 150136000
- 323 05 140086000
- 323 06 160245000
- 323 07 010275000
- 323 08 030225000
- 323 09 030125000
- 323 10 150155000
- 323 11 160235000
- 323 12 160255000
- 323 13 020214000
- 323 14 040264000
- 323 15 050214000
- 323 16 040165000
- 323 17 020135000
- 323 18 010115000
- 323 19 010146000
- 323 20 010126000
- 323 21 020135000
- 323 22 030186000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-154 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

323 23 040115000
 323 24 090075000
 324 01 050075000
 324 02 030135000
 324 03 040126000
 324 04 080086000
 324 05 090157000
 324 06 010126000
 324 07 030166000
 324 08 060106000
 324 09 060046000
 324 10 060055000
 324 11 070125000
 324 12 040144000
 324 13 050144000
 324 14 060194000
 324 15 070134000
 324 16 040105000
 324 17 020065000
 324 18 160055000
 324 19 020065000
 324 20 040096000
 324 21 030076000
 324 22 060096000
 324 23 010056000
 324 24 100126000
 325 01 100076000
 325 02 120105000
 325 03 120095000
 325 04 110105000
 325 05 090135000
 325 06 060075000
 325 07 110165000
 325 08 130085000
 325 09 120085000
 325 10 140224000
 325 11 150284000
 325 12 160305000
 325 13 150435000
 325 14 150424000
 325 15 150434000
 325 16 150305001
 325 17 140255000
 325 18 140245000
 325 19 120105000
 325 20 100145010
 325 21 100185001
 325 22 110135005
 325 23 090165001
 325 24 090175000
 326 01 090194000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-155 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 326 02 080224000
- 326 03 090244000
- 326 04 090274000
- 326 05 080284000
- 326 06 090284000
- 326 07 090224000
- 326 08 090284000
- 326 09 090264000
- 326 10 090224000
- 326 11 100164000
- 326 12 100144000
- 326 13 100084000
- 326 14 030124000
- 326 15 010125000
- 326 16 080085000
- 326 17 010085000
- 326 18 160145000
- 326 19 160145000
- 326 20 160115000
- 326 21 020145000
- 326 22 120085000
- 326 23 140086000
- 326 24 160175000
- 327 01 010205000
- 327 02 160215000
- 327 03 030085000
- 327 04 080085000
- 327 05 100056000
- 327 06 070096000
- 327 07 100116000
- 327 08 090086001
- 327 09 020056000
- 327 10 020086000
- 327 11 010115000
- 327 12 030135000
- 327 13 160114000
- 327 14 150074000
- 327 15 140084000
- 327 16 160195000
- 327 17 160215000
- 327 18 150095001
- 327 19 150075001
- 327 20 150175001
- 327 21 110145001
- 327 22 090075000
- 327 23 140075000
- 327 24 130085000
- 328 01 110145000
- 328 02 110125000
- 328 03 110115000
- 328 04 100155000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-156	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 328 05 100195000
- 328 06 110205000
- 328 07 120135000
- 328 08 120145000
- 328 09 110174000
- 328 10 110264000
- 328 11 110294000
- 328 12 120244000
- 328 13 120194000
- 328 14 120234000
- 328 15 120264000
- 328 16 120214000
- 328 17 120184000
- 328 18 120184000
- 328 19 120145000
- 328 20 120175000
- 328 21 120134000
- 328 22 120134000
- 328 23 120145000
- 328 24 130155000
- 329 01 130164000
- 329 02 130174000
- 329 03 130184000
- 329 04 120194000
- 329 05 120164000
- 329 06 130174000
- 329 07 130204000
- 329 08 130215000
- 329 09 130255001
- 329 10 140354000
- 329 11 150464000
- 329 12 150505000
- 329 13 150465001
- 329 14 150535001
- 329 15 150575000
- 329 16 150655000
- 329 17 150565000
- 329 18 150596000
- 329 19 150596000
- 329 20 150606000
- 329 21 150616000
- 329 22 150737000
- 329 23 160667000
- 329 24 010576000
- 330 01 020805000
- 330 02 020775000
- 330 03 020805000
- 330 04 020765000
- 330 05 010605000
- 330 06 010665000
- 330 07 010675000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-157	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

330 08 010575000
 330 09 010665000
 330 10 030865000
 330 11 060604000
 330 12 060554002
 330 13 050314003
 330 14 060734005
 330 15 060854000
 330 16 060914000
 330 17 070854000
 330 18 070924000
 330 19 060814000
 330 20 060964000
 330 21 070884000
 330 22 070684000
 330 23 070664000
 330 24 070564000
 331 01 060624000
 331 02 060574000
 331 03 060564000
 331 04 070614000
 331 05 070485000
 331 06 070395000
 331 07 060344000
 331 08 050434000
 331 09 050424000
 331 10 050444000
 331 11 050453000
 331 12 060452000
 331 13 060363000
 331 14 050333000
 331 15 040394000
 331 16 040404000
 331 17 030414000
 331 18 030344000
 331 19 020424000
 331 20 020495000
 331 21 020465000
 331 22 020445000
 331 23 020445000
 331 24 020435000
 332 01 020425000
 332 02 020465000
 332 03 020425000
 332 04 020385000
 332 05 010345000
 332 06 010395000
 332 07 010455000
 332 08 010495000
 332 09 160484000
 332 10 160434000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-158 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 332 11 150462000
- 332 12 150603000
- 332 13 150703000
- 332 14 150744000
- 332 15 150724000
- 332 16 140724000
- 332 17 140534000
- 332 18 140504000
- 332 19 140445000
- 332 20 140355000
- 332 21 140345000
- 332 22 140545000
- 332 23 140635006
- 332 24 140634014
- 333 01 140714002
- 333 02 140814000
- 333 03 140985006
- 333 04 141015007
- 333 05 150915047
- 333 06 150995016
- 333 07 150765007
- 333 08 160686002
- 333 09 150406000
- 333 10 150285000
- 333 11 150185001
- 333 12 070225000
- 333 13 060304000
- 333 14 070514000
- 333 15 070554000
- 333 16 070615000
- 333 17 070765000
- 333 18 070585000
- 333 19 070785000
- 333 20 070765000
- 333 21 070675000
- 333 22 070535000
- 333 23 070435000
- 333 24 060355000
- 334 01 060365000
- 334 02 050405000
- 334 03 060395000
- 334 04 060405000
- 334 05 060355000
- 334 06 060335000
- 334 07 070375000
- 334 08 070395000
- 334 09 080524000
- 334 10 090474000
- 334 11 090544000
- 334 12 080532000
- 334 13 080552000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-159 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

334 14 080503000
 334 15 080444000
 334 16 080284000
 334 17 070215000
 334 18 070215000
 334 19 070275000
 334 20 080225000
 334 21 090145000
 334 22 140135000
 334 23 060165000
 334 24 070195000
 335 01 080205000
 335 02 090155000
 335 03 100105000
 335 04 100085000
 335 05 110116000
 335 06 080145000
 335 07 100236000
 335 08 100166000
 335 09 130085000
 335 10 150124000
 335 11 020164000
 335 12 160164000
 335 13 160244000
 335 14 150354000
 335 15 150304000
 335 16 150304000
 335 17 140215000
 335 18 140235000
 335 19 160404000
 335 20 160454000
 335 21 160424000
 335 22 160474000
 335 23 160574000
 335 24 160584000
 336 01 160664000
 336 02 160494003
 336 03 010444006
 336 04 160564004
 336 05 160604014
 336 06 160753001
 336 07 160804002
 336 08 010885006
 336 09 011045004
 336 10 021105000
 336 11 050965005
 336 12 050744000
 336 13 051164000
 336 14 051184000
 336 15 061044000
 336 16 061004000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-160	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

336 17 060934000
 336 18 060814000
 336 19 060744000
 336 20 060594000
 336 21 060554000
 336 22 050465000
 336 23 060405000
 336 24 050345000
 337 01 050295000
 337 02 050345000
 337 03 050415000
 337 04 060345000
 337 05 050335000
 337 06 040345000
 337 07 040335000
 337 08 040325000
 337 09 040374000
 337 10 050414000
 337 11 050523000
 337 12 060423000
 337 13 060383000
 337 14 070303000
 337 15 060214000
 337 16 050234000
 337 17 040245000
 337 18 040175000
 337 19 160165000
 337 20 140256000
 337 21 130196000
 337 22 120227000
 337 23 120227000
 337 24 110237000
 338 01 120167000
 338 02 010146000
 338 03 050215000
 338 04 060255000
 338 05 050345000
 338 06 060395000
 338 07 050305000
 338 08 040305000
 338 09 040405000
 338 10 050504000
 338 11 060693000
 338 12 060673000
 338 13 060634000
 338 14 070574000
 338 15 060584000
 338 16 060474000
 338 17 060425000
 338 18 060345000
 338 19 060345000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-161	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

338 20 070335000
 338 21 070285000
 338 22 070305000
 338 23 070305000
 338 24 060255000
 339 01 070265000
 339 02 080275000
 339 03 100175000
 339 04 120065000
 339 05 140155000
 339 06 130245000
 339 07 140245000
 339 08 150165000
 339 09 010125000
 339 10 020254000
 339 11 010224000
 339 12 010213000
 339 13 010283000
 339 14 020343000
 339 15 030384000
 339 16 020484000
 339 17 010454000
 339 18 020385000
 339 19 010405000
 339 20 020385000
 339 21 020435000
 339 22 020494000
 339 23 020515000
 339 24 030445000
 340 01 030355000
 340 02 030405000
 340 03 040396000
 340 04 040415000
 340 05 040336000
 340 06 040366000
 340 07 040386000
 340 08 050375000
 340 09 050415000
 340 10 050384000
 340 11 050443000
 340 12 060392000
 340 13 060403000
 340 14 060393000
 340 15 050394000
 340 16 050344000
 340 17 040245000
 340 18 040165000
 340 19 050145000
 340 20 050136000
 340 21 130136000
 340 22 140156000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-162 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

340 23 140076000
 340 24 100217000
 341 01 110316000
 341 02 110285000
 341 03 100215000
 341 04 110245000
 341 05 110195000
 341 06 110225000
 341 07 120345000
 341 08 130245000
 341 09 130275000
 341 10 130274000
 341 11 130204000
 341 12 130214000
 341 13 150425000
 341 14 150405000
 341 15 150435000
 341 16 150415000
 341 17 150435000
 341 18 150405000
 341 19 150335000
 341 20 150206000
 341 21 110145000
 341 22 110235000
 341 23 100265000
 341 24 100345000
 342 01 100305000
 342 02 110364000
 342 03 110364000
 342 04 110404000
 342 05 100214003
 342 06 110304002
 342 07 110304002
 342 08 110284008
 342 09 110264011
 342 10 120285007
 342 11 120195000
 342 12 130125002
 342 13 110135002
 342 14 140395000
 342 15 150575000
 342 16 150676000
 342 17 150656000
 342 18 150597000
 342 19 150657000
 342 20 150577000
 342 21 150447000
 342 22 020436000
 342 23 030516000
 342 24 040426000
 343 01 030495006



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-163	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 343 02 050345000
- 343 03 050425000
- 343 04 050505000
- 343 05 040385000
- 343 06 040306000
- 343 07 050355000
- 343 08 050345000
- 343 09 040345000
- 343 10 050444000
- 343 11 050514000
- 343 12 060564000
- 343 13 060514000
- 343 14 060514000
- 343 15 070494000
- 343 16 070385000
- 343 17 080226000
- 343 18 080316000
- 343 19 080266000
- 343 20 080256000
- 343 21 070225000
- 343 22 070215000
- 343 23 080275000
- 343 24 090256000
- 344 01 090235000
- 344 02 090286000
- 344 03 110166000
- 344 04 120136000
- 344 05 120176000
- 344 06 120156000
- 344 07 130126000
- 344 08 140175000
- 344 09 120145000
- 344 10 120214000
- 344 11 120214000
- 344 12 130284000
- 344 13 140284000
- 344 14 140134000
- 344 15 150184000
- 344 16 130225011
- 344 17 130235006
- 344 18 130235004
- 344 19 140335006
- 344 20 130344004
- 344 21 140264006
- 344 22 140304004
- 344 23 140424000
- 344 24 140404000
- 345 01 130275001
- 345 02 110215000
- 345 03 120274000
- 345 04 110244000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-164	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 345 05 120214000
- 345 06 120324002
- 345 07 120394000
- 345 08 110424000
- 345 09 120364001
- 345 10 120304000
- 345 11 120304000
- 345 12 120284001
- 345 13 130275000
- 345 14 130375000
- 345 15 140515000
- 345 16 150645000
- 345 17 150516000
- 345 18 150406000
- 345 19 150186000
- 345 20 100106000
- 345 21 080156000
- 345 22 060136000
- 345 23 050325000
- 345 24 040355000
- 346 01 040464000
- 346 02 050374000
- 346 03 040245000
- 346 04 040225000
- 346 05 040235000
- 346 06 040214000
- 346 07 040135000
- 346 08 040095000
- 346 09 020114000
- 346 10 010174000
- 346 11 030184004
- 346 12 040304002
- 346 13 040424003
- 346 14 040404003
- 346 15 040394000
- 346 16 040484000
- 346 17 050405000
- 346 18 050345000
- 346 19 050345000
- 346 20 050415000
- 346 21 050475000
- 346 22 050545000
- 346 23 050454000
- 346 24 040494000
- 347 01 050474000
- 347 02 050494000
- 347 03 050454000
- 347 04 050424000
- 347 05 050464000
- 347 06 050434000
- 347 07 050444000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-165 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 347 08 050424000
- 347 09 050434000
- 347 10 050414000
- 347 11 050424000
- 347 12 050494000
- 347 13 050454000
- 347 14 050474000
- 347 15 050414000
- 347 16 050404000
- 347 17 040304000
- 347 18 020274000
- 347 19 010345000
- 347 20 010444000
- 347 21 010564000
- 347 22 010544000
- 347 23 010464000
- 347 24 020354000
- 348 01 020384000
- 348 02 030384000
- 348 03 030355000
- 348 04 030365000
- 348 05 020335000
- 348 06 020295000
- 348 07 060215000
- 348 08 060424001
- 348 09 040254000
- 348 10 040574000
- 348 11 060884000
- 348 12 060673000
- 348 13 060743000
- 348 14 050823000
- 348 15 060724000
- 348 16 060634000
- 348 17 060574000
- 348 18 060674000
- 348 19 050604000
- 348 20 060604000
- 348 21 060694000
- 348 22 050674000
- 348 23 050654000
- 348 24 050664000
- 349 01 050574000
- 349 02 050524000
- 349 03 050534000
- 349 04 050494000
- 349 05 050454000
- 349 06 050444000
- 349 07 050424000
- 349 08 050404000
- 349 09 060454000
- 349 10 070644000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-166	of C-173

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 349 11 070623000
- 349 12 070603000
- 349 13 080632000
- 349 14 070592000
- 349 15 070634000
- 349 16 070584000
- 349 17 070574000
- 349 18 070555000
- 349 19 070475000
- 349 20 080494000
- 349 21 080515000
- 349 22 080574000
- 349 23 080474000
- 349 24 090614000
- 350 01 090554000
- 350 02 100415000
- 350 03 090424000
- 350 04 080514000
- 350 05 080614000
- 350 06 080634000
- 350 07 080505000
- 350 08 070425000
- 350 09 070484000
- 350 10 070453000
- 350 11 070412000
- 350 12 080623000
- 350 13 080662000
- 350 14 080603000
- 350 15 080574000
- 350 16 070584000
- 350 17 070435000
- 350 18 070325000
- 350 19 070255000
- 350 20 080195000
- 350 21 070175000
- 350 22 080215000
- 350 23 060285000
- 350 24 060255000
- 351 01 070295000
- 351 02 060255000
- 351 03 060255000
- 351 04 060225000
- 351 05 050255000
- 351 06 040285000
- 351 07 040265000
- 351 08 040335000
- 351 09 040375000
- 351 10 030384000
- 351 11 030343000
- 351 12 030393000
- 351 13 030353000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-167 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 351 14 030304000
- 351 15 020394000
- 351 16 020384000
- 351 17 020355000
- 351 18 020345000
- 351 19 010474000
- 351 20 010524000
- 351 21 010485000
- 351 22 010515000
- 351 23 020485000
- 351 24 020424000
- 352 01 020404000
- 352 02 020355000
- 352 03 020305000
- 352 04 020325000
- 352 05 040285000
- 352 06 040325000
- 352 07 050345000
- 352 08 050315000
- 352 09 040215000
- 352 10 050344000
- 352 11 050483000
- 352 12 060543000
- 352 13 060443000
- 352 14 060423000
- 352 15 060424000
- 352 16 070404000
- 352 17 070315000
- 352 18 090266000
- 352 19 090286000
- 352 20 090265000
- 352 21 090255000
- 352 22 100195000
- 352 23 100135000
- 352 24 090135000
- 353 01 100195000
- 353 02 110256000
- 353 03 100255000
- 353 04 110306000
- 353 05 110306000
- 353 06 110296000
- 353 07 110337000
- 353 08 110337000
- 353 09 110196000
- 353 10 110205000
- 353 11 120194000
- 353 12 160164000
- 353 13 010145000
- 353 14 020194000
- 353 15 010244000
- 353 16 160165000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-168 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

353 17 020105000
 353 18 120115000
 353 19 110175000
 353 20 110245000
 353 21 110196000
 353 22 090236000
 353 23 090216000
 353 24 090096000
 354 01 070156000
 354 02 080135000
 354 03 090096000
 354 04 130096000
 354 05 110066000
 354 06 110136000
 354 07 120086000
 354 08 010215000
 354 09 160165000
 354 10 030154000
 354 11 030114000
 354 12 050114000
 354 13 040114000
 354 14 040154000
 354 15 060224001
 354 16 070204005
 354 17 080154006
 354 18 130134001
 354 19 140185000
 354 20 090565000
 354 21 080854000
 354 22 080884000
 354 23 080904000
 354 24 081004000
 355 01 080844000
 355 02 080964000
 355 03 070994000
 355 04 081014000
 355 05 081094000
 355 06 081004000
 355 07 080944000
 355 08 070934000
 355 09 081024000
 355 10 080954000
 355 11 070982000
 355 12 070982000
 355 13 070992000
 355 14 070973000
 355 15 070854000
 355 16 070724000
 355 17 070604000
 355 18 070584000
 355 19 070435000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-169 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

355 20 070365000
 355 21 070335000
 355 22 070325000
 355 23 070255000
 355 24 060184000
 356 01 040204000
 356 02 030244000
 356 03 020294000
 356 04 010374000
 356 05 010504000
 356 06 010584000
 356 07 160724000
 356 08 010594000
 356 09 010484000
 356 10 020544000
 356 11 020514000
 356 12 030423000
 356 13 030303000
 356 14 020313000
 356 15 030344000
 356 16 030304000
 356 17 020324000
 356 18 030245000
 356 19 020145000
 356 20 160185000
 356 21 140236000
 356 22 150256000
 356 23 150196000
 356 24 020205000
 357 01 020176000
 357 02 160295000
 357 03 010235000
 357 04 010166000
 357 05 160295000
 357 06 150305000
 357 07 150366000
 357 08 020206000
 357 09 150275000
 357 10 150365000
 357 11 150405000
 357 12 150485000
 357 13 150545000
 357 14 150496000
 357 15 150487000
 357 16 150487000
 357 17 150557000
 357 18 150467000
 357 19 150497000
 357 20 150437000
 357 21 150477000
 357 22 150407000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-170 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 357 23 150467000
- 357 24 150417000
- 358 01 150317000
- 358 02 150426000
- 358 03 150586000
- 358 04 160636000
- 358 05 150617000
- 358 06 150667000
- 358 07 150607000
- 358 08 150657000
- 358 09 150767000
- 358 10 150897000
- 358 11 150987000
- 358 12 150897000
- 358 13 150897002
- 358 14 150947004
- 358 15 150907001
- 358 16 160867006
- 358 17 060435029
- 358 18 050185002
- 358 19 050325000
- 358 20 070745000
- 358 21 070855000
- 358 22 070755000
- 358 23 070605000
- 358 24 070665000
- 359 01 070605000
- 359 02 070555000
- 359 03 070525000
- 359 04 070535000
- 359 05 070554000
- 359 06 070584000
- 359 07 070604000
- 359 08 070544000
- 359 09 070514000
- 359 10 080594000
- 359 11 080594000
- 359 12 080514000
- 359 13 070493000
- 359 14 070504000
- 359 15 070514000
- 359 16 080394000
- 359 17 070344000
- 359 18 070314000
- 359 19 070304000
- 359 20 070284000
- 359 21 070275000
- 359 22 070385000
- 359 23 080405000
- 359 24 080365000
- 360 01 080365000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-171 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

- 360 02 090445000
- 360 03 080395000
- 360 04 080455000
- 360 05 090445000
- 360 06 090475000
- 360 07 090485000
- 360 08 090514000
- 360 09 090464000
- 360 10 090443000
- 360 11 080433000
- 360 12 080423000
- 360 13 080363000
- 360 14 080343000
- 360 15 080274000
- 360 16 090294000
- 360 17 090195000
- 360 18 100245000
- 360 19 120175000
- 360 20 110165000
- 360 21 100175000
- 360 22 090275000
- 360 23 100285000
- 360 24 100255000
- 361 01 100255000
- 361 02 100265000
- 361 03 100335000
- 361 04 100345000
- 361 05 100375000
- 361 06 100355000
- 361 07 100424000
- 361 08 100444000
- 361 09 100474000
- 361 10 100514000
- 361 11 100534000
- 361 12 100514000
- 361 13 100554000
- 361 14 090484000
- 361 15 090544000
- 361 16 090524000
- 361 17 090464000
- 361 18 090494000
- 361 19 080484000
- 361 20 080564000
- 361 21 080544000
- 361 22 070504000
- 361 23 070594000
- 361 24 070604000
- 362 01 080534000
- 362 02 070634000
- 362 03 070764000
- 362 04 070764000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-172 of C-173	

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by		Date
Reviewed by		Date
Approved by		Date

- 362 05 070824000
- 362 06 080874000
- 362 07 070854000
- 362 08 080934000
- 362 09 080814000
- 362 10 080854000
- 362 11 070792000
- 362 12 080802000
- 362 13 080802000
- 362 14 070682000
- 362 15 070693000
- 362 16 070734000
- 362 17 070674000
- 362 18 070575000
- 362 19 080465000
- 362 20 080465000
- 362 21 080515000
- 362 22 090495000
- 362 23 080495000
- 362 24 090415000
- 363 01 090435000
- 363 02 090375000
- 363 03 090275000
- 363 04 080225000
- 363 05 070255000
- 363 06 070195000
- 363 07 060125000
- 363 08 050214000
- 363 09 050264000
- 363 10 040164000
- 363 11 050203000
- 363 12 030174000
- 363 13 160203000
- 363 14 160273000
- 363 15 150422000
- 363 16 010454000
- 363 17 020454000
- 363 18 020434000
- 363 19 010554000
- 363 20 020554000
- 363 21 010544000
- 363 22 010504000
- 363 23 010484000
- 363 24 010454000
- 364 01 010454000
- 364 02 020364000
- 364 03 020434000
- 364 04 030374000
- 364 05 030324000
- 364 06 030314000
- 364 07 030274000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	C-173 of C-173	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

364	08	020305000						
364	09	020234000						
364	10	040364000						
364	11	040344000						
364	12	040304000						
364	13	040345000						
364	14	050334000						
364	15	040215000						
364	16	030195000						
364	17	040255000						
364	18	040165000						
364	19	020165000						
364	20	020135000						
364	21	150095000						
364	22	090186000						
364	23	090176000						
364	24	090276000						
365	01	080237000						
365	02	100166000						
365	03	010106000						
365	04	020086000						
365	05	030136000						
365	06	060146000						
365	07	100086000						
365	08	140097000						
365	09	030086000						
365	10	010095000						
365	11	150244000						
365	12	010235000						
365	13	010295000						
365	14	160345000						
365	15	160305000						
365	16	160255000						
365	17	150245000						
365	18	160345000						
365	19	150245000						
365	20	140215000						
365	21	130165000						
365	22	140245000						
365	23	140256000						
365	24	140266000						
	8.0	7.0	6.0	7.0	10.0	17.0	17.0	12.0



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	D-1	of D-5

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT D
PSEG Site File



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	D-2	of	D-5

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

MACCS2 SITE FILE FOR PSEG ESPA

Originator: G. Teagarden (7/14/2008) - Population Updated by S&L 10/2009

10 SPATIAL INTERVALS

16 WIND DIRECTIONS

7 CROP CATEGORIES

4 WATER PATHWAY ISOTOPES

2 WATERSHEDS

63 ECONOMIC REGIONS

SPATIAL DISTANCES

KILOMETERS

1.6093 3.2187 4.8280 6.4374 8.0467 16.0935 32.1869 48.2804

64.3739 80.4674

POPULATION

0. 0. 0. 0. 170. 362. 200986. 177866.
 448847. 363839.
 0. 0. 5. 9. 50. 8729. 27634. 187239.
 951522. 1053252.
 0. 0. 2. 9. 67. 5174. 14923. 171366.
 696849. 709835.
 0. 0. 19. 50. 312. 1875. 7485. 79517.
 168204. 78672.
 0. 0. 14. 47. 42. 1631. 37292. 107168.
 41884. 87062.
 0. 0. 0. 0. 4. 539. 28321. 34813.
 14908. 28408.
 0. 0. 0. 0. 0. 9. 135. 895.
 56. 47396.
 0. 0. 0. 0. 0. 10. 256. 2592.
 2693. 19048.
 0. 0. 0. 0. 5. 190. 23209. 136055.
 62733. 54529.
 0. 0. 0. 6. 9. 828. 33333. 26456.
 26232. 39908.
 0. 0. 2. 9. 11. 2398. 6341. 12703.
 14398. 23676.
 0. 0. 2. 22. 208. 5766. 8588. 6352.
 18349. 32002.
 0. 0. 3. 181. 436. 19211. 15582. 15301.
 71710. 242510.
 0. 0. 70. 220. 373. 5284. 78925. 106793.
 90311. 37500.
 0. 0. 0. 164. 227. 3551. 165975. 93291.
 74425. 67892.
 0. 0. 0. 118. 37. 2432. 179067. 163291.
 220746. 138597.

LAND FRACTION

1.00 0.95 0.30 0.25 0.25 0.40 0.75 0.92 0.99 1.00
 1.00 1.00 0.93 0.97 1.00 0.95 0.95 0.85 0.95 0.99
 1.00 1.00 0.99 0.96 0.95 0.99 0.99 0.99 0.98 0.98
 1.00 0.98 0.99 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 0.95 0.95 0.97 1.00 1.00 1.00 0.99 0.98 1.00 0.99
 0.03 0.25 0.50 0.65 0.75 1.00 0.98 0.99 0.92 0.95



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	D-3	of	D-5

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

0.01 0.00 0.00 0.00 0.00 0.33 0.35 0.30 0.03 0.40
 0.01 0.00 0.00 0.00 0.00 0.03 0.50 0.25 0.35 0.40
 0.01 0.00 0.03 0.45 0.60 0.97 0.99 0.99 0.99 0.99
 0.01 0.00 0.45 0.97 0.92 1.00 1.00 1.00 1.00 0.99
 0.01 0.00 0.50 0.92 0.95 0.98 1.00 0.98 0.97 0.75
 0.01 0.00 0.45 0.92 0.92 0.99 0.97 0.93 0.75 0.25
 0.01 0.00 0.15 0.92 0.92 0.99 0.93 0.40 0.80 0.90
 0.01 0.00 0.00 0.70 0.97 0.99 0.93 0.90 0.90 0.90
 0.15 0.00 0.01 0.25 0.85 0.99 1.00 1.00 1.00 0.99
 0.95 0.30 0.01 0.10 0.35 0.75 0.90 1.00 1.00 0.99

REGION INDEX

1 2 2 2 2 2 2 4 5 6
 1 2 2 2 2 2 2 7 8 9
 1 2 2 2 2 210111213
 1 2 2 2 21415161718
 1 2 2 2 21920202122
 1 2 2 2 22320202422
 1 2 3 3 32626262627
 1 3 3 3 32826262930
 1 3 3 3 33132333435
 1 3 3 3 3 336373839
 1 3 3 3 3 340414243
 1 3 3 3 3 344454647
 1 3 3 3 3 348495051
 1 2 3 3 3 352535455
 1 2 2 3 3 3 3565758
 1 2 2 2 35960616263

WATERSHED INDEX

1 1 2 2 2 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1
 2 2 1 1 1 1 1 1 1 1
 2 2 2 2 2 2 2 2 2 1
 2 2 2 2 2 2 1 2 1 1
 2 2 2 2 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1 1
 2 2 2 2 1 1 1 1 1 1
 1 2 2 2 2 1 1 1 1 1

CROP SEASON AND SHARE

1 PASTURE 90. 270. 0.4100
 2 STORED FORAGE 150. 240. 0.1300
 3 GRAINS 150. 240. 0.2100
 4 GRN LEAFY VEGETABLES 150. 240. 0.0020
 5 OTHER FOOD CROPS 150. 240. 0.0040
 6 LEGUMES AND SEEDS 150. 240. 0.1500



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	D-4	of	D-5

Client	PSEG Nuclear Development		Prepared by		Date	
Project	PSEG ESPA		Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by		Date

7 ROOTS AND TUBERS 150. 240. 0.0030
 WATERSHED DEFINITION -- INITIAL AND ANNUAL WASHOFF AND INGESTION FACTORS

1 Sr-89		5.00E-06	0.0
2 Sr-90		5.00E-06	0.0
3 Cs-134		5.00E-06	0.0
4 Cs-137		5.00E-06	0.0

REGIONAL ECONOMIC DATA

01 EXCLUSION	0.45	0.090	1861.3	13673.7	235830.7
02 SALEM	0.45	0.090	1861.3	13673.7	235830.7
03 N_CASTLE	0.26	0.079	0948.0	19736.6	303569.3
04 N-20	0.20	0.037	2157.6	20444.1	277602.8
05 N-30	0.05	0.017	1958.8	18162.9	307006.4
06 N-40	0.13	0.100	1964.7	26183.0	351488.1
07 NNE-20	0.25	0.036	3144.9	26457.8	247747.7
08 NNE-30	0.12	0.013	2768.2	26733.3	250181.2
09 NNE-40	0.11	0.026	1981.1	22799.4	265861.5
10 NE-10	0.44	0.086	1981.3	13740.5	233949.1
11 NE-20	0.32	0.056	2672.0	21747.8	243357.2
12 NE-30	0.16	0.016	3403.4	29136.5	253768.9
13 NE-40	0.15	0.027	3187.8	23824.1	271205.3
14 ENE-5	0.43	0.083	2101.4	13807.3	232067.4
15 ENE-10	0.25	0.020	4021.7	14876.9	201961.4
16 ENE-20	0.29	0.035	3504.3	16494.4	215132.8
17 ENE-30	0.13	0.007	5595.6	19080.4	237336.0
18 ENE-40	0.09	0.003	6164.9	18356.6	245615.2
19 E-5	0.30	0.036	3541.6	14609.5	209487.9
20 CUMBERLND	0.23	0.012	4261.8	15010.6	198198.1
21 E-30	0.17	0.007	4389.2	16606.7	223788.3
22 E-40	0.07	0.000	4218.1	19155.6	265936.7
23 ESE-5	0.32	0.044	3301.6	14475.8	213251.2
24 ESE-30	0.19	0.009	3888.5	16201.6	218896.0
25 CAPE_MAY	0.06	0.000	2768.8	19774.4	280989.8
26 KENT_DE	0.49	0.088	1714.9	10388.2	200707.0
27 SE-40	0.43	0.014	3906.0	13360.2	224540.9
28 SES-5	0.38	0.084	1331.5	15062.4	252138.1
29 SES-30	0.49	0.078	2062.6	10727.1	203341.3
30 SES-40	0.47	0.023	3800.6	12421.5	216512.7
31 S-5	0.27	0.079	0986.4	19269.2	298426.2
32 S-10	0.46	0.087	1599.9	11790.5	216136.3
33 S-20	0.50	0.082	1767.9	10159.8	199201.7
34 S-30	0.52	0.063	1926.8	09474.5	194685.8
35 S-40	0.53	0.036	2423.0	09700.5	203968.5
36 SWS-10	0.40	0.103	1231.4	15426.4	272836.0
37 SWS-20	0.63	0.085	1270.4	09569.8	270201.8
38 SWS-30	0.63	0.064	1347.3	09240.4	264682.3
39 SWS-40	0.63	0.064	1166.0	10030.4	290197.2
40 SW-10	0.43	0.125	1256.5	15562.8	286509.2
41 SW-20	0.65	0.171	1368.6	09985.2	279459.4
42 SW-30	0.66	0.167	1334.9	09820.8	280989.8
43 SW-40	0.64	0.187	1402.0	10172.6	279384.1
44 WSW-10	0.32	0.089	1760.8	18256.9	257908.5



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	D-5	of	D-5

Client	PSEG Nuclear Development		Prepared by		Date	
Project	PSEG ESPA		Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by		Date

45	WSW-20	0.39	0.123	1997.0	16311.0	242353.7
46	WSW-30	0.33	0.313	0853.2	14611.5	278480.9
47	WSW-40	0.23	0.201	1473.6	17532.4	294788.4
48	W-10	0.31	0.088	1635.7	18484.6	264933.2
49	CECIL	0.35	0.095	2198.4	17460.1	233321.9
50	W-30	0.31	0.245	1284.0	15950.9	262675.3
51	W-40	0.33	0.298	1003.5	15264.2	269449.1
52	WNW-10	0.28	0.083	1260.6	19167.5	286007.4
53	WNW-20	0.35	0.104	3199.1	21168.5	276223.0
54	WNW-30	0.45	0.182	4643.1	25326.0	304823.7
55	WNW-40	0.66	0.316	4437.0	22199.0	233321.9
56	NW-20	0.32	0.107	3724.6	25741.9	345818.1
57	NW-30	0.36	0.132	5511.6	29619.0	372035.5
58	NW-40	0.52	0.230	5161.0	26449.5	304823.7
59	NWN-5	0.41	0.088	1678.7	14886.2	249378.4
60	NWN-10	0.31	0.082	1176.3	18220.9	286634.7
61	NWN-20	0.23	0.072	2025.2	21198.8	320127.6
62	NWN-30	0.30	0.107	4966.1	27892.5	366917.4
63	NWN-40	0.33	0.128	5161.7	29958.4	338693.0

END

*23456789012345678901234567890123456789012345678901234567890 - alignment

*



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	E.1-1	of E.1-20

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT E.1
 ATMOS Input File Data (ABWR, 4005 MWt)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*****
* FILE NAME: E.1.INP
*
* Sargent & Lundy (10/2009)
*
*****
* Run Identification (RI) Data
*****
* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT
*
RIATNAM1001 'ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS '
*
*****
* GEOMETRY (GE) DATA
*****
* NUMBER OF RADIAL SPATIAL ELEMENTS
*
GENUMRAD001 10
*
* SPATIAL ENDPOINT DISTANCES IN MILES (MATCHES SITE FILE)
*
* END001 1 2 3 4 5
* END002 10 20 30 40 50
*
* SPATIAL ENDPOINT DISTANCES IN KILOMETERS
*
GESPAEND001 1.61 3.22 4.83 6.44 8.05
GESPAEND002 16.1 32.2 48.3 64.4 80.5
*
*****
* NUCLIDE DATA
*****
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	E.1-3 of E.1-20

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.
		Prepared by
		Reviewed by
		Approved by
		Date
		Date
		Date

* NUMBER OF PSEUDO-STABLE NUCLIDES DEFINED IN THE MODEL
 * (USED TO TRUNCATE THE DECAY CHAINS) - USER'S GUIDE PG.C-1

ISNUMSTB001	27	
* LIST OF PSEUDO-STABLE NUCLIDES		
ISNAMSTB001	I-129	(daughter of Te-129 and Te-129m)
ISNAMSTB002	Xe-131m	(daughter of I-131)
ISNAMSTB003	Xe-133m	(daughter of I-133)
ISNAMSTB004	Xe-135m	(daughter of I-135)
ISNAMSTB005	Cs-135	(daughter of Xe-135 and Xe-135m)
ISNAMSTB006	Sm-147	(daughter of Pm-147)
ISNAMSTB007	U-234	(daughter of Pu-238)
ISNAMSTB008	U-235	(daughter of Pu-239)
ISNAMSTB009	U-236	(daughter of Pu-240)
ISNAMSTB010	U-237	(daughter of Pu-241)
ISNAMSTB011	Np-237	(daughter of Am-241)
ISNAMSTB012	Rb-87	(daughter of Kr-87)
ISNAMSTB013	Ba-137m	(daughter of Cs-137)
ISNAMSTB014	Rb-88	(daughter of Kr-88)
ISNAMSTB015	Y-91m	(daughter of Sr-91)
ISNAMSTB016	Zr-93	(daughter of Y-93)
ISNAMSTB017	Nb-93m	(daughter of Zr-93)
ISNAMSTB018	Nb-95m	(daughter of Zr-95)
ISNAMSTB019	Nb-97	(daughter of Zr-97 and Nb-97m)
ISNAMSTB020	Nb-97m	(daughter of Zr-97)
ISNAMSTB021	Tc-99	(daughter of Mo-99)
ISNAMSTB022	Rh-103m	(daughter of Ru-103)
ISNAMSTB023	Rh-106	(daughter of Ru-106)
ISNAMSTB024	Te-131	(daughter of Te-131m)
ISNAMSTB025	Pr-144	(daughter of Ce-144 and Pr-144m)
ISNAMSTB026	Pr-144m	(daughter of Ce-144)
ISNAMSTB027	Pm-147	(daughter of Nd-147)

*



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	E.1-4 of E.1-20
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* NUMBER OF RADIOACTIVE NUCLIDES DEFINED IN THE MODEL

* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

* ISNUMISO001 60

* NUMBER OF CHEMICAL ELEMENT GROUPS DEFINED IN THE MODEL

* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

* ISMAXGRP001 7

* GROUP 1 - NOBLE GASES

* GROUP 2 - IODINE

* GROUP 3 - CESIUM, RUBIDIUM

* GROUP 4 - TELLURIUM GROUP

* GROUP 5/9 - STRONTIUM

* GROUP 6 - MOLYBDENUM, COBALT, RUTHENIUM, TECHNETIUM

* GROUP 7/8 - LANTHANUM, YTTRIUM, NEODYMIUM, PROMETHIUM, AMERICIUM, CURIUM

* GROUP 8/8 - CERIUM, ACTINIDES (PLUTONIUM, NEPTUNIUM)

* GROUP 9/5 - BARIUM

* WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP

* ALL NUCLIDE GROUPS EXCEPT NOBLE GAS ARE ASSUMED SUBJECT

* TO BOTH WET AND DRY DEPOSITION.

* USER'S GUIDE APPENDIX C

* WETDEP DRYDEP

ISDEPFLA001 .FALSE. .FALSE.

ISDEPFLA002 .TRUE. .TRUE.

ISDEPFLA003 .TRUE. .TRUE.

ISDEPFLA004 .TRUE. .TRUE.

ISDEPFLA005 .TRUE. .TRUE.

ISDEPFLA006 .TRUE. .TRUE.

ISDEPFLA007 .TRUE. .TRUE.

* ISDEPFLA008 .TRUE. .TRUE.

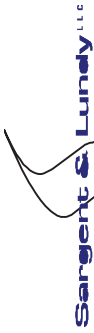


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No.	2009-11222	
Rev.	2	Date
Page	E.1-5	of E.1-20

	Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* ISDEPFLA009	.TRUE.	.TRUE.
* CHEMICAL ELEMENT GROUP ASSIGNMENT		
* USER'S GUIDE APPENDIX C		
* NUCNAM	IGROUP	
ISOTFGRP001	Co-58	6
ISOTFGRP002	Co-60	6
ISOTFGRP003	Kr-85	1
ISOTFGRP004	Kr-85m	1
ISOTFGRP005	Kr-87	1
ISOTFGRP006	Kr-88	1
ISOTFGRP007	Rb-86	3
ISOTFGRP008	Sr-89	5
ISOTFGRP009	Sr-90	5
ISOTFGRP010	Sr-91	5
ISOTFGRP011	Sr-92	5
ISOTFGRP012	Y-90	7
ISOTFGRP013	Y-91	7
ISOTFGRP014	Y-92	7
ISOTFGRP015	Y-93	7
ISOTFGRP016	Zr-95	7
ISOTFGRP017	Zr-97	7
ISOTFGRP018	Nb-95	7
ISOTFGRP019	Mo-99	6
ISOTFGRP020	Tc-99m	6
ISOTFGRP021	Ru-103	6
ISOTFGRP022	Ru-105	6
ISOTFGRP023	Ru-106	6
ISOTFGRP024	Rh-105	6
ISOTFGRP025	Sb-127	4
ISOTFGRP026	Sb-129	4
ISOTFGRP027	Te-127	4
ISOTFGRP028	Te-127m	4



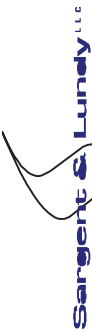
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page E.1-6 of E.1-20

Client	PSEG Nuclear Development		Prepared by		Date	
Project	PSEG ESPA		Reviewed by		Date	
Proj. No	12380-001	Equip. No.	Approved by		Date	

	Safety Related	X	Non-Safety Related			
ISOTGRP029	Te-129			4		
ISOTGRP030	Te-129m			4		
ISOTGRP031	Te-131m			4		
ISOTGRP032	Te-132			4		
ISOTGRP033	I-131			2		
ISOTGRP034	I-132			2		
ISOTGRP035	I-133			2		
ISOTGRP036	I-134			2		
ISOTGRP037	I-135			2		
ISOTGRP038	Xe-133			1		
ISOTGRP039	Xe-135			1		
ISOTGRP040	Cs-134			3		
ISOTGRP041	Cs-136			3		
ISOTGRP042	Cs-137			3		
ISOTGRP043	Ba-139			5	*9	
ISOTGRP044	Ba-140			5	*9	
ISOTGRP045	La-140			7		
ISOTGRP046	La-141			7		
ISOTGRP047	La-142			7		
ISOTGRP048	Ce-141			7	*8	
ISOTGRP049	Ce-143			7	*8	
ISOTGRP050	Ce-144			7	*8	
ISOTGRP051	Pr-143			7		
ISOTGRP052	Nd-147			7		
ISOTGRP053	Np-239			7	*8	
ISOTGRP054	Pu-238			7	*8	
ISOTGRP055	Pu-239			7	*8	
ISOTGRP056	Pu-240			7	*8	
ISOTGRP057	Pu-241			7	*8	
ISOTGRP058	Am-241			7		
ISOTGRP059	Cm-242			7		
ISOTGRP060	Cm-244			7		

* WET DEPOSITION (WD) DATA *****



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
Rev. 2 Date
Page E.1-7 of E.1-20

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
Prepared by	Date	
Reviewed by	Date	
Approved by	Date	

```

*****
*
* WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR
*
WDCWASH1001 9.5E-5 *NUREG/CR-4551 PART 7, TABLE 2.9
*
* WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR
*
WDCWASH2001 0.8 *NUREG/CR-4551 PART 7, TABLE 2.9
*
*****
* DRY DEPOSITION (DD) DATA
*
*****
* NUMBER OF PARTICLE SIZE GROUPS
*
DDNPSGRP001 1 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
*
* DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
*
DDVDEPOS001 0.01 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
*
*****
* DISPERSION PARAMETER (DP) DATA
*****
* # OF DISTANCES IN PLUME-SIZE TABLES--WHICH CAN BE USED AS AN ALTERNATIVE TO
* THE POWER-LAW MODEL: (TO UTILIZE THE POWER-LAW MODEL, SET NUM_DIST TO ZERO
* OR DELETE THE FOLLOWING DATA CARD)
*
NUM_DIST001 0
*
* POWER-LAW FUNCTION IS OF FORM: SIGMA = A * X ** B
*
* TADMOR ND GUR PARAMETRIZATION FOR DISTANCE RANGE 0.5 to 5.0 KM

```

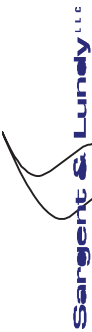


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page E.1-8 of E.1-20

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related				
* P-G CLASS:	A	B	C	D	E	F	
DPCYSIGA001	0.3658	0.2751	0.2089	0.1474	0.1046	0.0722	
DPCYSIGB001	0.9031	0.9031	0.9031	0.9031	0.9031	0.9031	
DPCZSIGA001	2.5E-4	1.9E-3	0.2	0.3	0.4	0.2	
DPCZSIGB001	2.125	1.6021	0.8543	0.6532	0.6021	0.6020	
* LINEAR SCALING FACTOR FOR SIGMA-Y FUNCTION, NORMALLY 1							
DPYSCALE001	1.0						
* LINEAR SCALING FACTOR FOR SIGMA-Z FUNCTION,							
* NORMALLY USED FOR SURFACE ROUGHNESS LENGTH CORRECTION.							
* (Z1 / Z0) ** 0.2, FROM CRAC2 WE HAVE (10 CM / 3 CM) ** 0.2 = 1.27							
* SEE NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C							
DPZSCALE001	1.27						
* REF/BASIS:							
* MACCS COMPUTES SIGMA-Y AND SIGMA-Z AS FOLLOWS:							
* SIGMA-Y = A * X ** B							
* SIGMA-Z = C * X ** D							
* THE SIGMA-Y COEFFICIENTS (A AND B) AND SIGMA-Z COEFFICIENTS (C AND D)							
* ARE TAKEN FROM NUREG-4551, VOL. 2, REV. 1, PART 7, SECTION 2.4.							
* NO SIGMA-Y SCALING IS REQUIRED/USED.							
* SIGMA-Z SCALING VALUE CONSISTENT WITH SAMPLE PROBLEMS IN							
* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C							



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* PLUME MEANDER EXPANSION FACTOR DATA

* TIME BASE FOR EXPANSION FACTOR (SECONDS)

* PMTIMBAS001 600.0 * 10 MINUTES

* BREAK POINT FOR FORMULA CHANGE (SECONDS)

* PMBRKPNT001 3600.0 * 1 HOUR

* EXPONENTIAL EXPANSION FACTOR NUMBER 1

* PMXPFFAC1001 0.2

* EXPONENTIAL EXPANSION FACTOR NUMBER 2

* PMXPFFAC2001 0.25

* REF/BASIS:

* ABOVE VALUES CONSISTENT WITH SECTION 2.3.2 FROM NUREG/CR-4551.

* PLUME RISE DATA

* THE FOLLOWING SCALING FACTORS COULD BE USED TO MODIFY THE MACCS METHOD OF PERFORMING PLUME RISE CALCS.

* SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A BOUYANT PLUME (USED BY FUNCTION CAUGHT)

* PRSCLCRW001 1.0



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	E.1-10 of E.1-20
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* * SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
 * (USED BY FUNCTION PLMRIS)
 *
 * PRSCLADP001 1.0
 *
 * SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
 * (USED BY FUNCTION PLMRIS)
 *
 * PRSCLEFP001 1.0
 *
 * REF/BASIS:
 *
 * THE SCALING FACTORS CAN BE USED TO MODIFY THE RESULTS OF THE HARD-WIRED
 * PLUME RISE CALCULATIONS PERFORMED BY MACCS. THIS FUNCTIONALITY IS NOT UTILIZED
 * IN THIS ANALYSIS (SCALING FACTORS SET TO 1).
 *
 * WAKE EFFECTS DATA
 *
 * DETERMINATION OF WAKE EFFECTS HAS BEEN REVISED FOR MACCS2. THE WIDTH VARIABLE
 * IS NO LONGER INCLUDED. ADDITIONALLY, VALUES MUST BE INCLUDED FOR EACH PLUME.
 *
 * * VENDOR DATA (ATTACHMENT A.1):
 * BUILDING WIDTH = 54.0 m
 * BUILDING HEIGHT = 37.7 m
 *
 * INITIAL VALUE FOR SIGMA-Y FOR EACH PLUME (4)
 *
 * SIGYINIT001 12.6 *INITIAL SIGMA-Y = W/4.3 = 54.0/4.3 = 12.6
 *
 * INITIAL VALUE FOR SIGMA-Z FOR EACH PLUME
 *
 * SIGZINIT001 17.5 *INITIAL SIGMA-Z = H/2.15 = 37.7/2.15 = 17.5



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	E.1-11 of E.1-20
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* * BUILDING HEIGHT (METERS)

* * * * *

WEBUILDH001 37.7

* * * * *

* * * * * RELEASE DATA (1/2, SEE END OF FILE SECOND PORTION)

* * * * *

* * * * * PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP

* * * * * UNIFORM SIZE DISTRIBUTION IS ASSUMED FOR ALL 7 CHEMICAL GROUPS

* * * * *

RDPDIST001	1.0	
RDPDIST002	1.0	
RDPDIST003	1.0	
RDPDIST004	1.0	
RDPDIST005	1.0	
RDPDIST006	1.0	
RDPDIST007	1.0	
* RDPDIST008	1.0	
* RDPDIST009	1.0	

* * * * *

* * * * * ABWR CORE INVENTORY BASED ON VENDOR DATA (ATTACHMENT A.1)

* * * * * NUCNAM CORINV (Bq/Mwt)

* * * * * THE INVENTORY AS GIVEN BELOW IS IN UNITS OF Bq/Mwt, IT NEEDS TO BE IN UNITS OF Bq

* * * * * VARIABLE RDCORCA001 IS SET TO 4005 (102% of Power Level) FOR THE NECESSARY UNIT CONVERSION

* * * * * SEE USER'S GUIDE PG. 5-28

* * * * *

RDCORINV001	Co-58	3.515E+12
RDCORINV002	Co-60	2.118E+10
RDCORINV003	Kr-85	1.116E+13
RDCORINV004	Kr-85m	2.492E+14
RDCORINV005	Kr-87	4.779E+14
RDCORINV006	Kr-88	6.771E+14
RDCORINV007	Rb-86	1.737E+12



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page E.1-12 of E.1-20

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related	
Equip. No.				
RDCORINV008	Sr-89			9.142E+14
RDCORINV009	Sr-90			9.555E+13
RDCORINV010	Sr-91			1.170E+15
RDCORINV011	Sr-92			1.247E+15
RDCORINV012	Y-90			1.031E+14
RDCORINV013	Y-91			1.191E+15
RDCORINV014	Y-92			1.253E+15
RDCORINV015	Y-93			1.448E+15
RDCORINV016	Zr-95			1.635E+15
RDCORINV017	Zr-97			1.679E+15
RDCORINV018	Nb-95			1.634E+15
RDCORINV019	Mo-99			1.853E+15
RDCORINV020	Tc-99m			1.599E+15
RDCORINV021	Ru-103			1.569E+15
RDCORINV022	Ru-105			1.106E+15
RDCORINV023	Ru-106			5.569E+14
RDCORINV024	Rh-105			9.337E+14
RDCORINV025	Sb-127			8.452E+13
RDCORINV026	Sb-129			2.989E+14
RDCORINV027	Te-127			8.343E+13
RDCORINV028	Te-127m			1.262E+13
RDCORINV029	Te-129			2.812E+14
RDCORINV030	Te-129m			7.625E+13
RDCORINV031	Te-131m			1.379E+14
RDCORINV032	Te-132			1.403E+15
RDCORINV033	I-131			9.733E+14
RDCORINV034	I-132			1.423E+15
RDCORINV035	I-133			2.036E+15
RDCORINV036	I-134			2.241E+15
RDCORINV037	I-135			1.922E+15
RDCORINV038	Xe-133			2.045E+15
RDCORINV039	Xe-135			2.645E+14
RDCORINV040	Cs-134			1.982E+14
RDCORINV041	Cs-136			4.364E+13
RDCORINV042	Cs-137			1.230E+14



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page E.1-13 of E.1-20

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		

Prepared by	Date
Reviewed by	Date
Approved by	Date

	Safety Related	X	Non-Safety Related	
RDCORINV043	Ba-139		1.825E+15	
RDCORINV044	Ba-140		1.756E+15	
RDCORINV045	La-140		1.860E+15	
RDCORINV046	La-141		1.641E+15	
RDCORINV047	La-142		1.606E+15	
RDCORINV048	Ce-141		1.628E+15	
RDCORINV049	Ce-143		1.536E+15	
RDCORINV050	Ce-144		1.307E+15	
RDCORINV051	Pr-143		1.519E+15	
RDCORINV052	Nd-147		6.694E+14	
RDCORINV053	Np-239		2.263E+16	
RDCORINV054	Pu-238		5.866E+12	
RDCORINV055	Pu-239		5.055E+11	
RDCORINV056	Pu-240		8.318E+11	
RDCORINV057	Pu-241		1.999E+14	
RDCORINV058	Am-241		1.627E+11	
RDCORINV059	Cm-242		1.187E+14	
RDCORINV060	Cm-244		2.719E+12	

* SCALING FACTOR TO ADJUST THE FOR THE POWER LEVEL

RDCORSCA001 4005.0 *SCALING FACTOR (MWT)

* DAUGHTER INGROWTH PRODUCTS RELEASED IN THE SAME PROPORTION AS THE PARENT

RDAPLFR001 PARENT

* OUTPUT CONTROL DATA

* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN

OCENDAT1001 .FALSE. *SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC

OCIDEBUG001 0 *0 SKIPS DEBUG PRINTING



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page E.1-14 of E.1-20

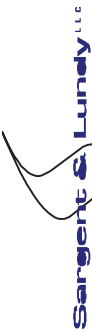
Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
Equip. No.			

```

*
* TYPE0NUMBER      0  *VALUE = 0 = NO ATMOSPHERIC (TYPE 0) RESULTS PRINTED
*
*
*
* METEOROLOGICAL SAMPLING DATA
*
* METEOROLOGICAL SAMPLING OPTION CODE:
*
* METCOD = 1, USER SPECIFIED DAY AND HOUR IN THE YEAR (FROM MET FILE) ,
* 2, WEATHER CATEGORY BIN SAMPLING,
* 3, 120 HOURS OF WEATHER SPECIFIED ON THE ATMOS USER INPUT FILE,
* 4, CONSTANT MET (BOUNDARY WEATHER USED FROM THE START),
* 5, STRATIFIED RANDOM SAMPLES FOR EACH DAY OF THE YEAR.
*
* METEOROLOGICAL SAMPLING (M1) DATA
*
M1METCOD001  2  * MET FILE PROVIDED IN ATTACHMENT C
*
* LAST SPATIAL INTERVAL FOR MEASURED WEATHER
*
*
* BOUNDARY WEATHER (M2) DATA
*
M2LIMSPA001  10  * INTERVAL 10 = 50 MILES
*
* BOUNDARY WEATHER MIXING LAYER HEIGHT
*
M2BNDMXH001  1000.0  * METERS, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER STABILITY CLASS INDEX
*
M2IBDSTB001  4  * D-STABILITY, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER RAIN RATE

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page E.1-15	of E.1-20

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

* M2BNDRAN001 5.0 * MM/HR, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER WIND SPEED
*
M2BNDWIND001 5.0 * M/S, USER'S GUIDE APPENDIX C
*
*****
* METEOROLOGICAL BIN SAMPLING (M4) DATA
*****
*
* NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
M4NRNINT001 5 * USER'S GUIDE APPENDIX C/NUREG 4551 APPENDIX A
*
* ENDPOINTS OF THE RAIN DISTANCE INTERVALS (KILOMETERS)
*
* NOTE: THESE MUST BE CHOSEN TO MATCH THE SPATIAL ENDPOINT DISTANCES
* SPECIFIED FOR ARRAY SPAEND (10 % ERROR IS ALLOWED)
*
* 2.0 5.0 10.0 30.0 50.0 MILES
*
M4RNDSTS001 3.22 8.05 16.1 48.3 80.5 *KM
*
* NUMBER OF RAIN INTENSITY BREAKPOINTS
M4NRINTN001 3 * USER'S GUIDE APPENDIX C
*
* RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
*
M4RRRATE001 2.0 4.0 6.0 * USER'S GUIDE APPENDIX C
*
* NUMBER OF WEATHER SAMPLES PER BIN
* USER'S GUIDE APPENDIX C USED 4. MORE SAMPLES ARE PREFERRED, BUT THIS INCREASES
* COMPUTING TIME. USED 12 IN THIS ANALYSIS - MORE ACCURATE WITH REASONABLE RUN TIME
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X Non-Safety Related	Page	E.1-16 of E.1-20
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

M4NSMPLS001 12 *4 MINIMUM, 24 MAXIMUM
 *
 * INITIAL SEED FOR RANDOM NUMBER GENERATOR FOR WEATHER SAMPLING
 *
 M4IRSEED001 79

 * RELEASE DATA (2/2)

 *

 * SOURCE TERM NUMBER 1 OF 10

 *
 RDATNAM2001 'NCL' * SOURCE TITLE
 RDOALARM001 6.12E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
 RDPDELAY001 9.72E+03 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
 * RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
 RDRELFRC001 4.40E-02 0.0 2.30E-05 2.30E-05 0.0 0.0 0.0
 *

 * SOURCE TERM NUMBER 2 OF 10

 *
 RDATNAM2001 'Case 1' * SOURCE TITLE
 RDOALARM001 6.91E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.60E+03 * DURATION OF PLUMES
RDPDELAY001 7.20E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 4 Grp. 5 Grp. 6 Grp. 7
RDRELFRC001 1.00E+00 0.0 1.50E-07 1.30E-05 0.0 0.0 0.0
.
*****
* SOURCE TERM NUMBER 3 OF 10
*****
*
RDATNAM2001 'Case 2' * SOURCE TITLE
RDOALARM001 6.55E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.60E+03 * DURATION OF PLUMES
RDPDELAY001 6.84E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 4 Grp. 5 Grp. 6 Grp. 7
RDRELFRC001 1.00E+0 0.0 5.00E-06 5.00E-06 0.0 0.0 0.0
.
*****
* SOURCE TERM NUMBER 4 OF 10
*****
*
RDATNAM2001 'Case 3' * SOURCE TITLE
RDOALARM001 1.77E+05 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
RDPDELAY001 1.80E+05 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page E.1-18 of E.1-20

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related
Project	PSEG ESPA	Prepared by		Date
Proj. No	12380-001	Reviewed by		Date
	Equip. No.	Approved by		Date

```

* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 4 Grp. 5 Grp. 6 Grp. 7
RDRELFRC001 1.00E+0 0.0 2.80E-04 2.20E-03 0.0 0.0 0.0
*
*****
* SOURCE TERM NUMBER 5 OF 10
*****
*
RDATNAM2001 'Case 4' * SOURCE TITLE
RDOALARM001 6.91E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.60E+03 * DURATION OF PLUMES
RDPDELAY001 7.20E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 4 Grp. 5 Grp. 6 Grp. 7
RDRELFRC001 1.00E+0 0.0 1.60E-03 1.60E-03 0.0 0.0 0.0
*
*****
* SOURCE TERM NUMBER 6 OF 10
*****
*
RDATNAM2001 'Case 5' * SOURCE TITLE
RDOALARM001 6.55E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.60E+03 * DURATION OF PLUMES
RDPDELAY001 6.84E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 4 Grp. 5 Grp. 6 Grp. 7
RDRELFRC001 1.00E+0 0.0 6.00E-03 5.30E-04 0.0 0.0 0.0
*

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page E.1-19 of E.1-20

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related
Project	PSEG ESPA	Prepared by		Date
Proj. No	12380-001	Reviewed by		Date
	Equip. No.	Approved by		Date

* SOURCE TERM NUMBER 7 OF 10

*
RDATNAM2001 'Case 6' * SOURCE TITLE
RDOALARM001 6.55E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
RDPDELAY001 6.84E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 4 Grp. 5 Grp. 6 Grp. 7
RDRELFR001 1.00E+0 0.0 3.10E-02 7.70E-02 0.0 0.0 0.0

* SOURCE TERM NUMBER 8 OF 10

*
RDATNAM2001 'Case 7' * SOURCE TITLE
RDOALARM001 6.91E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
RDPDELAY001 7.20E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 4 Grp. 5 Grp. 6 Grp. 7
RDRELFR001 1.00E+0 0.0 8.90E-02 9.90E-02 0.0 0.0 0.0

* SOURCE TERM NUMBER 9 OF 10



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*
RDATNAM2001 'Case 8' * SOURCE TITLE
RDOALARM001 4.32E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 4.18E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
RDPDELAY001 7.20E+03 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
RDRELFRC001 1.00E+00 1.90E-01 2.50E-01 0.0 0.0 0.0
.
*****
* SOURCE TERM NUMBER 10 OF 10
*****
*
RDATNAM2001 'Case 9' * SOURCE TITLE
RDOALARM001 4.39E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
RDPDELAY001 8.50E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
RDRELFRC001 1.00E+00 0.0 3.70E-01 3.60E-01 0.0 0.0 0.0
.

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	E.2-1	of E.2-13

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT E.2
EARLY Input File Data (ALL)



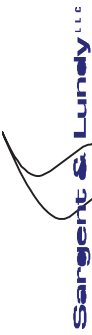
Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*****
* FILE NAME: E.2.INP
*
* Sargent & Lundy (10/2009)
*
*****
* DOSE CONVERSION FILE DATA
*****
*DOSE CONVERSION FACTOR FILENAME
DCF_FILE001 'C:\MACCS2\DOSDATA.INP'
*
*****
* MISCELLANEOUS DATA
*****
DESCRIPTIVE TITLE DESCRIBING THIS "EARLY" INPUT FILE

MIEANAM1001 'GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS '
*
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
* FALSE ASSIGNED BECAUSE CHRONC IS TO BE RUN AFTER EARLY
*
MIENDAT2001 .FALSE.
*
* DISPERSION MODEL OPTION CODE:
* USER'S GUIDE APPENDIC C/NUREG 4551 APPENDIX A
1 * STRAIGHT LINE
2 * WIND-SHIFT WITH ROTATION
3 * WIND-SHIFT WITHOUT ROTATION
*
MIIPLUME001 2
*
* NUMBER OF FINE GRID SUBDIVISIONS USED BY THE MODEL
* 3, 5 OR 7 ALLOWED
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	E.2-3 of E.2-13
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

MINUMFIN001 7
*
* LEVEL OF DEBUG OUTPUT REQUIRED, NORMAL RUNS SHOULD SPECIFY ZERO (MINIMUM DEBUG OUTPUT)
*
MIIPRINT001 0
*
* LOGICAL FLAG SIGNIFYING THAT THE RISK CONTRIBUTION TABLES ARE NOT TO BE PRINTED
*
* RISBIN
*
MIRISCAT001 .FALSE.
*
* FLAG INDICATING WIND-ROSES FROM ATMOS ARE TO USED
*
MIOVRRID001 .FALSE.
*
*****
* ORGAN DEFINITION (OD) DATA
*****
*
* ORGANS TO BE USED FOR HEALTH EFFECTS
*
*
* ORGNAM ORGFLG
*
MIOGDEF001 'A-SKIN' .TRUE.
MIOGDEF002 'A-RED MARR' .TRUE.
MIOGDEF003 'A-LUNGS' .TRUE.
MIOGDEF004 'A-THYROIDH' .TRUE.
MIOGDEF005 'A-STOMACH' .TRUE.
MIOGDEF006 'A-LOWER LI' .TRUE.
MIOGDEF007 'L-EDEWBODY' .TRUE.
MIOGDEF008 'L-RED MARR' .TRUE.
MIOGDEF009 'L-BONE SUR' .TRUE.
MIOGDEF010 'L-BREAST' .TRUE.
MIOGDEF011 'L-LUNGS' .TRUE.
MIOGDEF012 'L-THYROID' .TRUE.

```

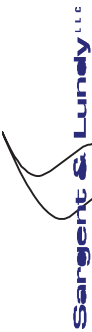


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	E.2-4 of E.2-13
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

```

MIORGDEF013 'L-LOWER LI' .TRUE.
MIORGDEF014 'L-BLAD WAL' .TRUE.
MIORGDEF015 'L-LIVER' .TRUE.
MIORGDEF016 'L-THYROIDH' .TRUE.
*
*****
* POPULATION DISTRIBUTION (PD) DATA
*****
* FLAG INDICATES THAT THE POPULATION DATA IS PROVIDED IN A SEPARATE FILE
*
PDDOPFLG001 FILE
*
*****
* SHIELDING AND EXPOSURE (SE) DATA
*****
* THREE VALUES OF EACH PROTECTION FACTOR ARE SUPPLIED,
* ONE FOR EACH TYPE OF ACTIVITY:
*
* ACTIVITY TYPE:
* 1 - EVACUEES WHILE MOVING
* 2 - NORMAL ACTIVITY IN SHELTERING AND EVACUATION ZONE
* 3 - SHELTERED ACTIVITY
*
* CLOUD SHIELDING FACTORS
*
* EVACUEES NORMAL SHELTER
SECSFACT001 1. 0.75 0.6
*
* PROTECTION FACTORS FOR INHALATION
*
* EVACUEES NORMAL SHELTER
SEPROTIN001 1. 0.41 0.33
*

```

Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

* BREATHING RATES (CUBIC METERS PER SECOND)
*
* EVACUEES NORMAL SHELTER
SEBRRATE001 2.66E-4 2.66E-4 2.66E-4
*
* SKIN PROTECTION FACTORS
*
* EVACUEES NORMAL SHELTER
SESKPFAC001 1.0 0.41 0.33
*
* GROUND SHIELDING FACTORS
*
* EVACUEES NORMAL SHELTER
SEGSHFAC001 0.5 0.33 0.2
*
* RESUSPENSION INHALATION MODEL CONCENTRATION COEFFICIENT (SEC/METER)
SERESCON001 1.E-4
*
* RESUSPENSION CONCENTRATION COEFFICIENT HALF-LIFE (SEC)
SERESHAF001 1.82E5
*
*****
* EVACUATION ZONE DATA BLOCK
*****
*
* SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
EZEANAM2001 '95% EVACUATION'
*
* THE TYPE OF WEIGHTING TO BE APPLIED TO THE EMERGENCY RESPONSE SCENARIOS
* (A VALUE OF 'TIME' OR 'PEOPLE')
*
EZWNAME001 'PEOPLE'

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	E.2-6 of E.2-13
Non-Safety Related		Prepared by	Date
Client	PSEG Nuclear Development	Reviewed by	Date
Project	PSEG ESPA	Approved by	Date
Proj. No	12380-001	Equip. No.	

* * WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO

* * 95% OF PEOPLE EVACUATED

* * EZWTFRAC001 0.95

* * LAST RING IN THE MOVEMENT ZONE

* * (RING 6 CORRESPONDS TO 60 MILES - NO EXPOSURE AFTER TRAVELING TO 10 MILES)

* * EZLASM0V001 6

* * FLAG DEFINING THE TIME AT WHICH EVACUEES "ENTER" THE DESTINATION ELEMENT

* * TRAVELPOINT 'BOUNDARY'

* * RADIAL EVACUATION SPEED (M/S), SPEED TO EXIT EPZ ONCE TRAVEL BEGINS

* * 95 MIN TRAVEL TIME TO CLEAR EPZ (10 MILES)

* * EZESPEED001 2.8 2.8 2.8

* * EVACUATION IS BASED ON A RADIAL EVACUATION

* * EZEVALYP001 'RADIAL'

* * THE DURATION (SECONDS) OF THE EARLY PHASE OF EVACUATION (1440 HOURS)

* * EZDURBEG001 86400.0

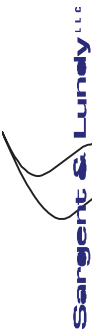
* * THE DURATION (SECONDS) OF THE MIDDLE PHASE OF EVACUATION

* * EZDURMID001 0.0

* * CONTROL FLAG INDICATING THAT THE INITIATION OF SHELTERING AND

* * EVACUATION ACTIONS WILL OCCUR AT THE OFF-SITE ALARM TIME (ATMOS INPUT VARIABLE)

* *



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X	Page	E.2-7 of E.2-13
Non-Safety Related		Prepared by	Date
Client PSEG Nuclear Development		Reviewed by	Date
Project PSEG ESPA		Approved by	Date
Proj. No 12380-001		Equip. No.	

```

EZREFPNT001 'ALARM'
*
* THE NUMBER OF CONCENTRIC RINGS IN WHICH EVACUATION AND/OR SHELTERING CAN OCCUR FOR
* THE RESIDENT POPULATION
*
EZNUMEVA001 6
*
* FOR EACH DISTANCE RING IN THE SHELTER/EVACUATION REGION - THE DELAY TO TAKE SHELTER
* (SECONDS) FOR RESIDENT INDIVIDUALS (65 MIN DELAY)
*
EZDLTSHL001 3900. 3900. 3900. 3900. 3900.
*
*DELAY FROM SHELTER TO EVAC
*
EZDLTEVA001 0. 0. 0. 0. 0.
*
*****
* SHELTER AND RELOCATION (SR) ZONE DATA
*****
*
* DURATION OF THE EMERGENCY PHASE (SECONDS FROM PLUME ARRIVAL)
* (ONE WEEK)
*
SRENDEMP001 604800.
*
* CRITICAL ORGAN FOR RELOCATION DECISIONS
* NUREGR 4551, APPENDIX A and HC ER
* EDEWBODY - EFFECTIVE WHOLE-BODY DOSE EQUIVALENT
*
SRCRIORG001 'L-EDEWBODY'
*
* HOT SPOT RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
* ONE-HALF DAY, NUREGR 4551, APPENDIX A
*
SRTIMHOT001 43200.

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	E.2-8 of E.2-13
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

*
* NORMAL RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
* ONE DAY, NUREGR 4551, APPENDIX A and HC ER
*
SRTIMNRM001 86400.
*
* HOT SPOT RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
* (1 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)
* HC ER
*
SRDOSHT001 0.01
*
* NORMAL RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
* (1 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)
* HC ER
*
SRDOSNRM001 0.01
*
*****
* EARLY FATALITY (DF) DATA
*****
*
* NUMBER OF EARLY FATALITY EFFECTS
* HC ER
*
EFNUMEFA001 3
*
* ORGNAM EFFACA EFFACB EFFTHR
*
EFATAGRP001 'A-RED MARR' 3.8 5.0 1.5
EFATAGRP002 'A-LUNGS' 10.0 7.0 5.0
EFATAGRP003 'A-LOWER LI' 15.0 10.0 8.0
*
*****
* EARLY INJURY MODEL PARAMETERS
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	E.2-9 of E.2-13
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

*****
*
* NUMBER OF EARLY INJURY EFFECTS
*
EINUMEIN001 0
*
*****
* LATENT CANCER (LC) PARAMETERS
*****
*
* NUMBER OF LATENT CANCER EFFECTS
*
LCNUMACA001 7
*
* THRESHOLD DOSE FOR APPLYING THE DOSE DEPENDENT REDUCTION FACTOR
*
LCDDTHRE001 0.2 (20 REM, BELOW WHICH DDREFA WILL BE APPLIED)
*
* DOSE THRESHOLD FOR LINEAR DOSE RESPONSE (SV)
*
* LINEAR MODEL(QUADRATIC MODEL IS NOT BEING USED)
*
LCACTHRE001 0.0
*
*
* ACNAME ORGNAM ACSUSC DOSEFA DOSEFB CFRISK CIRISK DDREFA
*
LCANCERS001 'LEUKEMIA' 'L-RED MARR' 1.0 1.0 0.0 9.70E-3 0.0 2.0
LCANCERS002 'BONE' 'L-BONE SUR' 1.0 1.0 0.0 1.20E-4 0.0 2.0
LCANCERS003 'BREAST' 'L-BREAST' 1.0 1.0 0.0 5.40E-3 1.7E-2 1.0
LCANCERS004 'LUNG' 'L-LUNGS' 1.0 1.0 0.0 1.55E-2 0.0 2.0
LCANCERS005 'THYROID' 'L-THYROIDH' 1.0 1.0 0.0 7.20E-4 7.2E-3 1.0
LCANCERS006 'GI' 'L-LOWER LI' 1.0 1.0 0.0 3.36E-2 0.0 2.0
LCANCERS007 'OTHER' 'L-EDEWBODY' 1.0 1.0 0.0 2.76E-2 0.0 2.0
*
*****
* RESULT 1 - TOTAL NUMBER OF A GIVEN EFFECT (LATENT CANCER, EARLY DEATH)
*****

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page E.2-10 of E.2-13

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

* NUMBER OF DESIRED RESULTS OF THIS TYPE

TYPE1NUMBER 5

	NAME	I1DIS1	I2DIS1
TYPE1OUT001	'CAN FAT/TOTAL'	1	10 * 0 to 50 miles
TYPE1OUT002	'CAN FAT/TOTAL'	1	6 * 0 to 10 miles
TYPE1OUT003	'ERL FAT/TOTAL'	1	10 * 0 to 50 miles
TYPE1OUT004	'ERL FAT/TOTAL'	1	2 * 0 to 2 miles
TYPE1OUT005	'ERL FAT/TOTAL'	1	1 * 0 to 1 miles

* RESULT 2 - FURTHEST DISTANCE AT WHICH A GIVEN RISK OF EARLY DEATH IS EXCEEDED

* NUMBER OF DESIRED RESULTS OF THIS TYPE

TYPE2NUMBER 0

* RESULT 3 - POPULATION EXCEEDING A DOSE THRESHOLD

* NUMBER OF DESIRED RESULTS OF THIS TYPE

TYPE3NUMBER 2

TYPE3OUT001	'L-EDEWBODY'	2.0	* 2 Sv = 200 rem
TYPE3OUT002	'L-EDEWBODY'	0.25	* 0.25 Sv = 25 rem

* RESULT 4 - AVERAGE INDIVIDUAL RISK



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page E.2-11 of E.2-13

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date

* NUMBER OF DESIRED RESULTS OF THIS TYPE

TYPE4NUMBER 0

* RESULT 5 - POPULATION DOSE

* NUMBER OF DESIRED RESULTS OF THIS TYPE

TYPE5NUMBER 2

* NAME I1DIS5 I2DIS5

TYPE5OUT001 'L-EDEWBODY' 1 6 * 0 to 10 miles

TYPE5OUT002 'L-EDEWBODY' 1 10 * 0 to 50 miles

* RESULT 6 - CENTERLINE DOSE VS. DISTANCE

* NUMBER OF DESIRED RESULTS OF THIS TYPE

TYPE6NUMBER 0

* RESULT 7 - CENTERLINE RISK VS. DISTANCE

TYPE7NUMBER 0

* RESULT 8 - POPULATION-WEIGHTED RISK



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X Non-Safety Related	Page	E.2-12 of E.2-13
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
TYPE8NUMBER      6
*
*          NAME          I1DIS8 I2DIS8
*
TYPE8OUT001 'ERL FAT/TOTAL'  1  10 *0-50 MILES
TYPE8OUT002 'ERL FAT/TOTAL'  1   2 *0- 2 MILES
TYPE8OUT003 'ERL FAT/TOTAL'  1   1 *0- 1 MILES
TYPE8OUT004 'ERL FAT/TOTAL'  3   3 *2- 3 MILES
TYPE8OUT005 'CAN FAT/TOTAL'  1  10 *0-50 MILES
TYPE8OUT006 'CAN FAT/TOTAL'  1   6 *0-10 MILES
*
*****
* RESULT A - PEAK DOSE AT A DISTANCE
*
*          NUMA
*
TYPEANUMBER      1
*
*          NAME          I1DISA I2DISA
*
TYPEAOUT001 'L-EDEWBODY'  1   1  CCDF
*
*****
* RESULT B - PEAK DOSE AT AN (r, theta) LOCATION
*
*****
*
TYPEBNUMBER      0
*
*****
* TERMINATOR CARD
*
*****
*

```




**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No.	2009-11222	
Rev.	2	Date
Page	E.2-13 of E.2-13	

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date
Equip. No.		

```

*
*
* *****
* EMERGENCY RESPONSE SCENARIO NUMBER 2
* *****
*
* *****
* EVACUATION ZONE DATA BLOCK
* *****
*
* SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
*
* EZEANAM2001 'NO EVACUATION'
*
* WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO
* 5% OF PEOPLE RELOCATED (NO EVACUATION)
*
* EZWTFRAC001 0.05
*
* LAST RING IN THE MOVEMENT ZONE
* A ZERO TURNS OFF THE EVACUATION MODEL
*
* EZLASM0V001 0
*
  
```



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	E.3-1 of E.3-10	

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT E.3
CHRONC Input File Data (ALL)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page E.3-2	of E.3-10
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*****
* FILE NAME E.3.INP
*
* Sargent & Lundy (10/2009)
*
*****
* DESCRIPTIVE TITLE DESCRIBING THIS "CHRONC" INPUT FILE
*
CHCHNAME001 'GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS '
*
* ECONOMIC DATA USED: 2009 CPI, 2002 CENSUS OF AGRICULTURE, 2005 BEA & BLS DATA
*
*****
* EMERGENCY RESPONSE COST DATA
*****
* EMERGENCY PHASE - DAILY COST FOR PERSON RELOCATED ($/PERSON-DAY)
*
CHEVACST001 53.19 * 27.00 * 1.97
*
* INTERMEDIATE PHASE - DAILY COST FOR PERSON RELOCATED ($/PERSON-DAY)
*
CHRELCST001 53.19 * 27.00 * 1.97
*
*****
* LONG TERM PROTECTIVE ACTION DATA
*****
*
DUR_INTPHAS 0.0 *(in seconds) (no intermediate phase)
*
* LONG-TERM PHASE DOSE PROJECTION PERIOD, THE DURATION OF THE EXPOSURE
* PERIOD OVER WHICH THE LONG-TERM DOSE CRITERION IS EVALUATED (SECONDS)
*
CHTMPACT001 1.58E8 * seconds (5 YEARS)

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

*
* DOSE CRITERION FOR INTERMEDIATE PHASE RELOCATION (SV) (YEAR 0-0.5)
*
* CHDSCRTI001 1.0E5 (NO INTERMEDIATE PHASE RELOCATION)
*
* DOSE CRITERION FOR LONG-TERM PHASE RELOCATION (SV) * (YEAR 0.5-5)
*
* CHDSCRLLT001 0.03 (3 REM)
*
* CRITICAL ORGAN NAME FOR LONG-TERM ACTIONS
*
* CHCRTOCR001 'L-EDEWBODY'
*
* LONG TERM EXPOSURE PERIOD
*
* CHEXPTIM001 1.58E9 * (50 YEARS PER EPA STANDARD DEFAULT EXPONENTIAL FACTORS)
*
* *****
* DECONTAMINATION PLAN DATA BLOCK
* *****
*
* NUMBER OF LEVELS OF DECONTAMINATION
*
* CHLVLDEC001 2
*
* DECONTAMINATION TIMES CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
* (SECONDS)
*
* CHTIMDEC001 5.184E6 1.0368E7 (60, 120 DAYS)
*
* DOSE REDUCTION FACTORS CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
*
* CHDSRFACT001 3. 15.
*
* COST OF FARM DECONTAMINATION PER FARMLAND UNIT AREA (DOLLARS/HECTARE)

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* FOR THE VARIOUS LEVELS OF DECONTAMINATION

* CHCDFRM0001 1109. 2463.

* * COST OF NONFARM DECONTAMINATION PER RESIDENT PERSON (DOLLARS/PERSON)

* FOR THE VARIOUS LEVELS OF DECONTAMINATION

* CHCDNFRM001 5910. 15760.

* * FRACTION OF FARMLAND DECONTAMINATION COST DUE TO LABOR

* FOR THE VARIOUS DECONTAMINATION LEVELS

* CHFRFDL0001 .3 .35

* * FRACTION OF NON-FARM DECONTAMINATION COST DUE TO LABOR

* FOR THE VARIOUS DECONTAMINATION LEVELS

* CHFRNFDL001 .7 .5

* * FRACTION OF TIME WORKERS IN FARM AREAS SPEND IN CONTAMINATED AREAS

* FOR THE VARIOUS DECONTAMINATION LEVELS

* CHTFWKF0001 .10 .33

* * FRACTION OF TIME WORKERS IN NON-FARM AREAS SPEND IN CONTAMINATED AREAS

* FOR THE VARIOUS DECONTAMINATION LEVELS

* CHTFWKNF001 .33 .33

* * AVERAGE COST OF DECONTAMINATION LABOR (DOLLARS/MAN-YEAR)

* CHDLBCST001 68950.

* *****

* INTERDICTION COST DATA BLOCK

* *****



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* DEPRECIATION (DETERIORATION) RATE DURING INTERDICTION PERIOD (PER YEAR)

* CHDPRATE001 .20 *(NUREG/CR-4551 PART 7 TABLE 5.1)

* INVESTMENT INCOME RETURN (DISCOUNT RATE) DURING INTERDICTION PERIOD (PER YEAR)

* THIS VALUE SHOULD BE DERIVED AS A REAL RETURN RATE ADJUSTED FOR INFLATION.

* CHDSRATE001 .07 *(NEI 05-01)

* POPULATION RELOCATION COST (DOLLARS/PERSON)

* CHPOPCST001 9850.

* GROUNDSHINE WEATHERING DEFINITION DATA BLOCK

* NUMBER OF TERMS IN THE GROUNDSHINE WEATHERING RELATIONSHIP (EITHER 1 OR 2)

* CHNGWTRM001 2

* GROUNDSHINE WEATHERING COEFFICIENTS

* CHGWCOEF001 0.5 0.5

* HALF LIVES CORRESPONDING TO THE GROUNDSHINE WEATHERING COEFFICIENTS (S)

* CHTGWHLF001 1.6E7 2.8E9

* RESUSPENSION WEATHERING DEFINITION DATA BLOCK

*



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* NUMBER OF TERMS IN THE RESUSPENSION WEATHERING RELATIONSHIP

* CHNRWTRM001 3

* * RESUSPENSION CONCENTRATION COEFFICIENTS (/ METER)

* * RELATIONSHIP BETWEEN GROUND CONCENTRATION AND INSTANTANEOUS AIR CONC.

* CHRWCOEF001 1.0E-5 1.0E-7 1.0E-9 * (SAMPLE PROBLEM A, JON HELTON)

* * HALF-LIVES CORRESPONDING TO THE RESUSPENSION CONCENTRATION COEFFICIENTS (S)

* CHTRWHLF001 1.6E7 1.6E8 1.6E9 * (6 MONTHS, 5 YEARS, 50 YEARS)

* *****

* * REGIONAL CHARACTERISTICS DATA

* *****

* * FRACTION OF AREA THAT IS LAND IN THE REGION

* CHFRACLD001 0.95 * (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)

* * FRACTION OF LAND DEVOTED TO FARMING IN THE REGION

* CHFRCFRM001 0.382 * (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)

* * AVERAGE VALUE OF ANNUAL FARM PRODUCTION IN THE REGION (DOLLARS/HECTARE)

* * (CASH RECEIPTS FROM FARMING PLUS VALUE OF HOME CONSUMPTION) / (LAND IN FARMS)

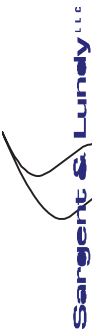
* CHFRMPRD001 371.0 * (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)

* * FRACTION OF FARM PRODUCTION RESULTING FROM DAIRY PRODUCTION IN THE REGION

* * (VALUE OF MILK PRODUCED) / (CASH RECEIPTS FROM FARMING PLUS HOME CONSUMPTION)

* CHDPFRCT001 0.198 * (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)

* *



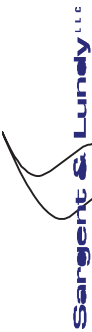
Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	E.3-7 of E.3-10

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
Prepared by		Date
Reviewed by		Date
Approved by		Date

```

* VALUE OF FARM WEALTH (DOLLARS/HECTARE)
* (AVERAGE VALUE PER HECTARE OF FARM LAND AND BUILDINGS TO 50 MILES)
*
CHVALWF0001 16636.
*
* FRACTION OF FARM WEALTH IN IMPROVEMENTS FOR THE REGION
*
CHFRFIM0001 0.25 * SURRY & PEACH BOTTOM (NUREG/CR-4551 PART 7, TABLE 5.4)
*
* NON-FARM WEALTH, PROPERTY AND IMPROVEMENTS FOR THE REGION (DOLLARS/PERSON)
* THE VALUE OF ALL RESIDENTIAL, BUSINESS, AND PUBLIC ASSETS WHICH WOULD BE
* LOST IN THE EVENT OF PERMANENT INTERDICTION (CONDEMNATION) OF THE AREA
*
CHVALWNF001 275924.
*
* FRACTION OF NON-FARM WEALTH IN IMPROVEMENTS FOR THE REGION
*
CHFRNFIM001 0.8
*
*****
* FOOD INGESTION MODEL
*****
*
*NEW COMIDA2-BASED FOOD INGESTION MODEL
*
CHFDPATH001 'NEW'
*
* FILE PATH OF THE COMIDA2 FILE
*
BIN_FILE001 'C:\MACCS2\SAMP_A.BIN'
*
* THE MAXIMUM ALLOWABLE FOOD INGESTION DOSE FROM MILK CROPS
*
DOSEMILK001 EFFECTIVE THYROID (Sv)
0.0025 0.025

```

Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	E.3-8 of E.3-10
Non-Safety Related			

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

```

DOSE0THR001 0.0025 0.025
*
* EFFECTIVE THYROID (Sv)
DOSELONG001 0.005 0.050
*
* NUMBER OF NUCLIDES IN THE WATER INGESTION PATHWAY MODEL
*
* CHNUMPI001 4
*
* TABLE OF NUCLIDE DEFINITIONS IN THE WATER INGESTION PATHWAY MODEL
*
* IF A SITE DATA FILE IS DEFINED, THE DATA DEFINING THE WATERSHED INGESTION
* FACTOR IS SUPERSEDED BY THE CORRESPONDING DATA IN THE SITE DATA FILE
*
*
* INITIAL ANNUAL INGESTION FACTOR
* WATER WASHOFF WASHOFF (Bq INGESTED) /
* NUCLIDE FRACTION RATE (Bq IN WATER)
*
* NAMWPI WSHFRI WSHRTA WINGF
* CHWTRISO001 Sr-89 0.01 0.004 5.0E-6
* CHWTRISO002 Sr-90 0.01 0.004 5.0E-6
* CHWTRISO003 Cs-134 0.005 0.001 5.0E-6
* CHWTRISO004 Cs-137 0.005 0.001 5.0E-6
*
*****
* SPECIAL OPTIONS DATA BLOCK
*****
* DETAILED PRINT OPTION CONTROL SWITCHES, LOOK AT THE CODE BEFORE TURNING ON!!
* KSWDSC
*
* CHKSWTCH001 0
*
*****
* POPULATION DOSE RESULTS

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	E.3-9 of E.3-10
Non-Safety Related		Prepared by	Date
Client	PSEG Nuclear Development	Reviewed by	Date
Project	PSEG ESPA	Approved by	Date
Proj. No	12380-001	Equip. No.	

```

*****
* DEFINE THE TYPE 9 RESULTS
* LONG-TERM POPULATION DOSE IN A GIVEN REGION BROKEN DOWN BY THE 12 PATHWAYS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
*
TYPE9NUMBER 2 (UP TO 10 ALLOWED)
*
* ORGNAM INNER OUTER
*
TYPE9OUT001 'L-EDEWBODY' 1 6 (0-10 MILES)
TYPE9OUT002 'L-EDEWBODY' 1 10 (0-50 MILES)
*
*****
* ECONOMIC COST RESULTS
*****
* ECONOMIC COST RESULTS IN A REGION BROKEN DOWN BY 12 TYPES OF COSTS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
*
TYPE10NUMBER 1 * (UP TO 10 ALLOWED)
*
* INNER OUTER
*
TYPE10OUT001 1 10 *(0-50 MILES)
*
*****
* ACTION DISTANCE RESULTS
*****
* DEFINE A FLAG THAT CONTROLS THE PRODUCTION OF THE ACTION DISTANCE RESULTS
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page E.3-10 of E.3-10	
Non-Safety Related		Prepared by	Date
Client PSEG Nuclear Development		Reviewed by	Date
Project PSEG ESPA		Approved by	Date
Proj. No 12380-001	Equip. No.		

```

* SPECIFYING A VALUE OF .TRUE. TURNS ON ALL 8 OF THE ACTION DISTANCE RESULTS,
* A VALUE OF .FALSE. WILL ELIMINATE THE ACTION DISTANCE RESULTS FROM THE OUTPUT.
*
* TYP11FLAG11 .FALSE.
*
*****
* IMPACTED AREA/POPULATION RESULTS
*****
* IMPACTED AREA/POPULATION RESULTS IN A REGION BROKEN DOWN BY 6 TYPES OF IMPACTS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 8
*
TYP12NUMBER 1 (UP TO 10 ALLOWED)
*
* INNER OUTER
*
TYP12OUT01 1 10 (0-50 MILES)
*
*****
* MAXIMAL ANNUAL FOOD INGESTION DOSE TO AN INDIVIDUAL
*****
* MAXIMAL ANNUAL FOOD INGESTION DOSE TO AN INDIVIDUAL
*
* This result is calculated after accounting for temporary or
* permanent interdiction. It is only available for the "new" food model.
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
*
TYP13NUMBER 0 (UP TO 10 ALLOWED)
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	E.4-1	of E.4-20

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT E.4
 ATMOS Input File Data (ABWR, 4300 MWt)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2 Date

Page E.4-2 of E.4-20

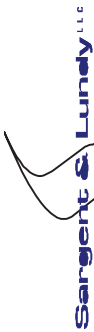
Safety Related X Non-Safety Related

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

*****
* FILE NAME: E.4.INP
*
* Sargent & Lundy (10/2009)
*
*****
* Run Identification (RI) Data
*****
* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT
*
RIATNAM1001 'ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS '
*
*****
* GEOMETRY (GE) DATA
*****
* NUMBER OF RADIAL SPATIAL ELEMENTS
*
GENUMRAD001 10
*
* SPATIAL ENDPOINT DISTANCES IN MILES (MATCHES SITE FILE)
*
* END001 1 2 3 4 5
* END002 10 20 30 40 50
*
* SPATIAL ENDPOINT DISTANCES IN KILOMETERS
*
GESPAEND001 1.61 3.22 4.83 6.44 8.05
GESPAEND002 16.1 32.2 48.3 64.4 80.5
*
*****
* NUCLIDE DATA
*****
*
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	E.4-3 of E.4-20

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.
Prepared by		Date
Reviewed by		Date
Approved by		Date

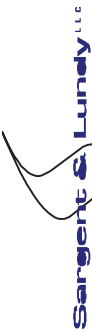
* NUMBER OF PSEUDO-STABLE NUCLIDES DEFINED IN THE MODEL
 * (USED TO TRUNCATE THE DECAY CHAINS) - USER'S GUIDE PG.C-1

ISNUMSTB001 27

* LIST OF PSEUDO-STABLE NUCLIDES

ISNUMSTB001	I-129	(daughter of Te-129 and Te-129m)
ISNUMSTB002	Xe-131m	(daughter of I-131)
ISNUMSTB003	Xe-133m	(daughter of I-133)
ISNUMSTB004	Xe-135m	(daughter of I-135)
ISNUMSTB005	Cs-135	(daughter of Xe-135 and Xe-135m)
ISNUMSTB006	Sm-147	(daughter of Pm-147)
ISNUMSTB007	U-234	(daughter of Pu-238)
ISNUMSTB008	U-235	(daughter of Pu-239)
ISNUMSTB009	U-236	(daughter of Pu-240)
ISNUMSTB010	U-237	(daughter of Pu-241)
ISNUMSTB011	Np-237	(daughter of Am-241)
ISNUMSTB012	Rb-87	(daughter of Kr-87)
ISNUMSTB013	Ba-137m	(daughter of Cs-137)
ISNUMSTB014	Rb-88	(daughter of Kr-88)
ISNUMSTB015	Y-91m	(daughter of Sr-91)
ISNUMSTB016	Zr-93	(daughter of Y-93)
ISNUMSTB017	Nb-93m	(daughter of Zr-93)
ISNUMSTB018	Nb-95m	(daughter of Zr-95)
ISNUMSTB019	Nb-97	(daughter of Zr-97 and Nb-97m)
ISNUMSTB020	Nb-97m	(daughter of Zr-97)
ISNUMSTB021	Tc-99	(daughter of Mo-99)
ISNUMSTB022	Rh-103m	(daughter of Ru-103)
ISNUMSTB023	Rh-106	(daughter of Ru-106)
ISNUMSTB024	Te-131	(daughter of Te-131m)
ISNUMSTB025	Pr-144	(daughter of Ce-144 and Pr-144m)
ISNUMSTB026	Pr-144m	(daughter of Ce-144)
ISNUMSTB027	Pm-147	(daughter of Nd-147)

*

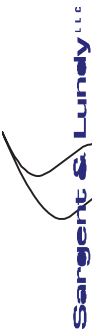


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	E.4-4 of E.4-20
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
		Prepared by	Date
		Reviewed by	Date
		Approved by	Date

```

* NUMBER OF RADIOACTIVE NUCLIDES DEFINED IN THE MODEL
* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
*
ISNUMISO001 60
*
* NUMBER OF CHEMICAL ELEMENT GROUPS DEFINED IN THE MODEL
* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
*
ISMAGR001 7
*
* GROUP 1 - NOBLE GASES
* GROUP 2 - IODINE
* GROUP 3 - CESIUM, RUBIDIUM
* GROUP 4 - TELLURIUM GROUP
* GROUP 5/9 - STRONTIUM
* GROUP 6 - MOLYBDENUM, COBALT, RUTHENIUM, TECHNETIUM
* GROUP 7/8 - LANTHANUM, YTTRIUM, NEODYMIUM, PROMETHIUM, AMERICIUM, CURIUM
* GROUP 8/8 - CERIUM, ACTINIDES (PLUTONIUM, NEPTUNIUM)
* GROUP 9/5 - BARIUM
*
* WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP
* ALL NUCLIDE GROUPS EXCEPT NOBLE GAS ARE ASSUMED SUBJECT
* TO BOTH WET AND DRY DEPOSITION.
* USER'S GUIDE APPENDIX C
*
* WETDEP DRYDEP
*
ISDEPFLA001 .FALSE. .FALSE.
ISDEPFLA002 .TRUE. .TRUE.
ISDEPFLA003 .TRUE. .TRUE.
ISDEPFLA004 .TRUE. .TRUE.
ISDEPFLA005 .TRUE. .TRUE.
ISDEPFLA006 .TRUE. .TRUE.
ISDEPFLA007 .TRUE. .TRUE.
* ISDEPFLA008 .TRUE. .TRUE.

```



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page E.4-5 of E.4-20

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

* ISDEPFLA009	.TRUE.	.TRUE.			
* CHEMICAL ELEMENT GROUP ASSIGNMENT					
* USER'S GUIDE APPENDIX C					
* NUCNAM	IGROUP				
ISOTFGRP001	Co-58		6		
ISOTFGRP002	Co-60		6		
ISOTFGRP003	Kr-85		1		
ISOTFGRP004	Kr-85m		1		
ISOTFGRP005	Kr-87		1		
ISOTFGRP006	Kr-88		1		
ISOTFGRP007	Rb-86		3		
ISOTFGRP008	Sr-89		5		
ISOTFGRP009	Sr-90		5		
ISOTFGRP010	Sr-91		5		
ISOTFGRP011	Sr-92		5		
ISOTFGRP012	Y-90		7		
ISOTFGRP013	Y-91		7		
ISOTFGRP014	Y-92		7		
ISOTFGRP015	Y-93		7		
ISOTFGRP016	Zr-95		7		
ISOTFGRP017	Zr-97		7		
ISOTFGRP018	Nb-95		7		
ISOTFGRP019	Mo-99		6		
ISOTFGRP020	Tc-99m		6		
ISOTFGRP021	Ru-103		6		
ISOTFGRP022	Ru-105		6		
ISOTFGRP023	Ru-106		6		
ISOTFGRP024	Rh-105		6		
ISOTFGRP025	Sb-127		4		
ISOTFGRP026	Sb-129		4		
ISOTFGRP027	Te-127		4		
ISOTFGRP028	Te-127m		4		

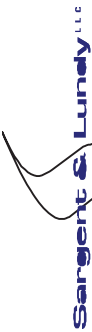


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	E.4-6 of E.4-20

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related	
ISOTGRP029	Te-129			4
ISOTGRP030	Te-129m			4
ISOTGRP031	Te-131m			4
ISOTGRP032	Te-132			4
ISOTGRP033	I-131			2
ISOTGRP034	I-132			2
ISOTGRP035	I-133			2
ISOTGRP036	I-134			2
ISOTGRP037	I-135			2
ISOTGRP038	Xe-133			1
ISOTGRP039	Xe-135			1
ISOTGRP040	Cs-134			3
ISOTGRP041	Cs-136			3
ISOTGRP042	Cs-137			3
ISOTGRP043	Ba-139		*9	5
ISOTGRP044	Ba-140		*9	5
ISOTGRP045	La-140			7
ISOTGRP046	La-141			7
ISOTGRP047	La-142			7
ISOTGRP048	Ce-141		*8	7
ISOTGRP049	Ce-143		*8	7
ISOTGRP050	Ce-144		*8	7
ISOTGRP051	Pr-143			7
ISOTGRP052	Nd-147			7
ISOTGRP053	Np-239		*8	7
ISOTGRP054	Pu-238		*8	7
ISOTGRP055	Pu-239		*8	7
ISOTGRP056	Pu-240		*8	7
ISOTGRP057	Pu-241		*8	7
ISOTGRP058	Am-241			7
ISOTGRP059	Cm-242			7
ISOTGRP060	Cm-244			7

 * WET DEPOSITION (WD) DATA



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
Rev. 2 Date
Page E.4-7 of E.4-20

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

```

*****
*
* WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR
*
WDCWASH1001 9.5E-5 *NUREG/CR-4551 PART 7, TABLE 2.9
*
* WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR
*
WDCWASH2001 0.8 *NUREG/CR-4551 PART 7, TABLE 2.9
*
*****
* DRY DEPOSITION (DD) DATA
*
*****
* NUMBER OF PARTICLE SIZE GROUPS
*
DDNPSGRP001 1 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
*
* DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
*
DDVDEPOS001 0.01 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
*
*****
* DISPERSION PARAMETER (DP) DATA
*****
* # OF DISTANCES IN PLUME-SIZE TABLES--WHICH CAN BE USED AS AN ALTERNATIVE TO
* THE POWER-LAW MODEL: (TO UTILIZE THE POWER-LAW MODEL, SET NUM_DIST TO ZERO
* OR DELETE THE FOLLOWING DATA CARD)
*
NUM_DIST001 0
*
* POWER-LAW FUNCTION IS OF FORM: SIGMA = A * X ** B
*
* TADMOR ND GUR PARAMETRIZATION FOR DISTANCE RANGE 0.5 to 5.0 KM

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	E.4-8 of E.4-20

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

* (NUREG/CR-4551 PART 7 TABLE 2.4)

* P-G CLASS: A B C D E F

DPCYSIGA001	0.3658	0.2751	0.2089	0.1474	0.1046	0.0722
DPCYSIGB001	0.9031	0.9031	0.9031	0.9031	0.9031	0.9031
DPCZSIGA001	2.5E-4	1.9E-3	0.2	0.3	0.4	0.2
DPCZSIGB001	2.125	1.6021	0.8543	0.6532	0.6021	0.6020

* LINEAR SCALING FACTOR FOR SIGMA-Y FUNCTION, NORMALLY 1

* DPYSCALE001 1.0

* LINEAR SCALING FACTOR FOR SIGMA-Z FUNCTION, NORMALLY USED FOR SURFACE ROUGHNESS LENGTH CORRECTION. (Z1 / Z0) ** 0.2, FROM CRAC2 WE HAVE (10 CM / 3 CM) ** 0.2 = 1.27

* SEE NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

* DPZSCALE001 1.27

* REF/BASIS:

* MACCS COMPUTES SIGMA-Y AND SIGMA-Z AS FOLLOWS:

* SIGMA-Y = A * X ** B

* SIGMA-Z = C * X ** D

* THE SIGMA-Y COEFFICIENTS (A AND B) AND SIGMA-Z COEFFICIENTS (C AND D) ARE TAKEN FROM NUREG-4551, VOL. 2, REV. 1, PART 7, SECTION 2.4.

* NO SIGMA-Y SCALING IS REQUIRED/USED.

* SIGMA-Z SCALING VALUE CONSISTENT WITH SAMPLE PROBLEMS IN NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* PLUME MEANDER EXPANSION FACTOR DATA

* TIME BASE FOR EXPANSION FACTOR (SECONDS)

* PMTIMBAS001 600.0 * 10 MINUTES

* BREAK POINT FOR FORMULA CHANGE (SECONDS)

* PMBRKPNT001 3600.0 * 1 HOUR

* EXPONENTIAL EXPANSION FACTOR NUMBER 1

* PMXPFFAC1001 0.2

* EXPONENTIAL EXPANSION FACTOR NUMBER 2

* PMXPFFAC2001 0.25

* REF/BASIS:

* ABOVE VALUES CONSISTENT WITH SECTION 2.3.2 FROM NUREG/CR-4551.

* PLUME RISE DATA

* THE FOLLOWING SCALING FACTORS COULD BE USED TO MODIFY THE MACCS METHOD OF PERFORMING PLUME RISE CALCS.

* SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A BOUYANT PLUME (USED BY FUNCTION CAUGHT)

* PRSCLCRW001 1.0



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* * SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
 * (USED BY FUNCTION PLMRIS)
 *
 * PRSCLADP001 1.0
 *
 * SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
 * (USED BY FUNCTION PLMRIS)
 *
 * PRSCLEFP001 1.0
 *
 * REF/BASIS:
 *
 * THE SCALING FACTORS CAN BE USED TO MODIFY THE RESULTS OF THE HARD-WIRED
 * PLUME RISE CALCULATIONS PERFORMED BY MACCS. THIS FUNCTIONALITY IS NOT UTILIZED
 * IN THIS ANALYSIS (SCALING FACTORS SET TO 1).
 *
 * WAKE EFFECTS DATA
 *
 * DETERMINATION OF WAKE EFFECTS HAS BEEN REVISED FOR MACCS2. THE WIDTH VARIABLE
 * IS NO LONGER INCLUDED. ADDITIONALLY, VALUES MUST BE INCLUDED FOR EACH PLUME.
 *
 * * VENDOR DATA (ATTACHMENT A.1):
 * BUILDING WIDTH = 54.0 m
 * BUILDING HEIGHT = 37.7 m
 *
 * INITIAL VALUE FOR SIGMA-Y FOR EACH PLUME (4)
 *
 * SIGYINIT001 12.6 *INITIAL SIGMA-Y = W/4.3 = 54.0/4.3 = 12.6
 *
 * INITIAL VALUE FOR SIGMA-Z FOR EACH PLUME
 *
 * SIGZINIT001 17.5 *INITIAL SIGMA-Z = H/2.15 = 37.7/2.15 = 17.5



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	E.4-11 of E.4-20
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
		Prepared by	Date
		Reviewed by	Date
		Approved by	Date

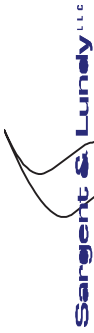
* * BUILDING HEIGHT (METERS)
 * *
 * WEBUILDH001 37.7
 * *
 * * * * *
 * * RELEASE DATA (1/2, SEE END OF FILE SECOND PORTION)
 * * * * *

* * PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP
 * * UNIFORM SIZE DISTRIBUTION IS ASSUMED FOR ALL 7 CHEMICAL GROUPS
 * *

RDPDIST001	1.0
RDPDIST002	1.0
RDPDIST003	1.0
RDPDIST004	1.0
RDPDIST005	1.0
RDPDIST006	1.0
RDPDIST007	1.0
* RDPDIST008	1.0
* RDPDIST009	1.0

* * ABWR CORE INVENTORY BASED ON VENDOR DATA (ATTACHMENT A.1)
 * * NUCNAM CORINV (Bq/Mwt)
 * * THE INVENTORY AS GIVEN BELOW IS IN UNITS OF Bq/Mwt, IT NEEDS TO BE IN UBITS OF Bq
 * * VARIABLE RDCORCA001 IS SET TO 4300 MWt FOR THE NECESSARY UNIT CONVERSION
 * * SEE USER'S GUIDE PG. 5-28
 * *

RDCORINV001	Co-58	3.515E+12
RDCORINV002	Co-60	2.118E+10
RDCORINV003	Kr-85	1.116E+13
RDCORINV004	Kr-85m	2.492E+14
RDCORINV005	Kr-87	4.779E+14
RDCORINV006	Kr-88	6.771E+14
RDCORINV007	Rb-86	1.737E+12



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page E.4-12 of E.4-20

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related	
Equip. No.				
RDCORINV008	Sr-89			9.142E+14
RDCORINV009	Sr-90			9.555E+13
RDCORINV010	Sr-91			1.170E+15
RDCORINV011	Sr-92			1.247E+15
RDCORINV012	Y-90			1.031E+14
RDCORINV013	Y-91			1.191E+15
RDCORINV014	Y-92			1.253E+15
RDCORINV015	Y-93			1.448E+15
RDCORINV016	Zr-95			1.635E+15
RDCORINV017	Zr-97			1.679E+15
RDCORINV018	Nb-95			1.634E+15
RDCORINV019	Mo-99			1.853E+15
RDCORINV020	Tc-99m			1.599E+15
RDCORINV021	Ru-103			1.569E+15
RDCORINV022	Ru-105			1.106E+15
RDCORINV023	Ru-106			5.569E+14
RDCORINV024	Rh-105			9.337E+14
RDCORINV025	Sb-127			8.452E+13
RDCORINV026	Sb-129			2.989E+14
RDCORINV027	Te-127			8.343E+13
RDCORINV028	Te-127m			1.262E+13
RDCORINV029	Te-129			2.812E+14
RDCORINV030	Te-129m			7.625E+13
RDCORINV031	Te-131m			1.379E+14
RDCORINV032	Te-132			1.403E+15
RDCORINV033	I-131			9.733E+14
RDCORINV034	I-132			1.423E+15
RDCORINV035	I-133			2.036E+15
RDCORINV036	I-134			2.241E+15
RDCORINV037	I-135			1.922E+15
RDCORINV038	Xe-133			2.045E+15
RDCORINV039	Xe-135			2.645E+14
RDCORINV040	Cs-134			1.982E+14
RDCORINV041	Cs-136			4.364E+13
RDCORINV042	Cs-137			1.230E+14



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page E.4-13 of E.4-20

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related
Equip. No.			
RDCORINV043	Ba-139		1.825E+15
RDCORINV044	Ba-140		1.756E+15
RDCORINV045	La-140		1.860E+15
RDCORINV046	La-141		1.641E+15
RDCORINV047	La-142		1.606E+15
RDCORINV048	Ce-141		1.628E+15
RDCORINV049	Ce-143		1.536E+15
RDCORINV050	Ce-144		1.307E+15
RDCORINV051	Pr-143		1.519E+15
RDCORINV052	Nd-147		6.694E+14
RDCORINV053	Np-239		2.263E+16
RDCORINV054	Pu-238		5.866E+12
RDCORINV055	Pu-239		5.055E+11
RDCORINV056	Pu-240		8.318E+11
RDCORINV057	Pu-241		1.999E+14
RDCORINV058	Am-241		1.627E+11
RDCORINV059	Cm-242		1.187E+14
RDCORINV060	Cm-244		2.719E+12

* SCALING FACTOR TO ADJUST THE FOR THE POWER LEVEL

RDCORSCA001 4300.0 *SCALING FACTOR (MWT)

* DAUGHTER INGROWTH PRODUCTS RELEASED IN THE SAME PROPORTION AS THE PARENT

RDAPLFR001 PARENT

* OUTPUT CONTROL DATA

* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN

OCENDAT1001 .FALSE. *SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC

OCIDEBUG001 0 *0 SKIPS DEBUG PRINTING



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page E.4-14 of E.4-20

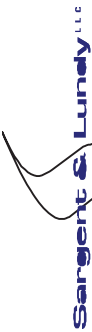
Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

```

*
* TYPE0NUMBER      0  *VALUE = 0 = NO ATMOSPHERIC (TYPE 0) RESULTS PRINTED
*
*
*
* METEOROLOGICAL SAMPLING DATA
*
* METEOROLOGICAL SAMPLING OPTION CODE:
*
* METCOD = 1, USER SPECIFIED DAY AND HOUR IN THE YEAR (FROM MET FILE) ,
* 2, WEATHER CATEGORY BIN SAMPLING,
* 3, 120 HOURS OF WEATHER SPECIFIED ON THE ATMOS USER INPUT FILE,
* 4, CONSTANT MET (BOUNDARY WEATHER USED FROM THE START),
* 5, STRATIFIED RANDOM SAMPLES FOR EACH DAY OF THE YEAR.
*
* METEOROLOGICAL SAMPLING (M1) DATA
*
M1METCOD001  2  * MET FILE PROVIDED IN ATTACHMENT C
*
* LAST SPATIAL INTERVAL FOR MEASURED WEATHER
*
*
* BOUNDARY WEATHER (M2) DATA
*
M2LIMSPA001  10  * INTERVAL 10 = 50 MILES
*
* BOUNDARY WEATHER MIXING LAYER HEIGHT
*
M2BNDMXH001  1000.0  * METERS, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER STABILITY CLASS INDEX
*
M2IBDSTB001  4  * D-STABILITY, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER RAIN RATE

```



Calcs. For **ENVIRONMENTAL CONSEQUENCE**
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No.	2009-11222
Rev.	2
Date	
Page	E.4-15 of E.4-20

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

```

* M2BNDRAN001 5.0 * MM/HR, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER WIND SPEED
*
M2BNDWIND001 5.0 * M/S, USER'S GUIDE APPENDIX C
*
*****
* METEOROLOGICAL BIN SAMPLING (M4) DATA
*****
*
* NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
M4NRNINT001 5 * USER'S GUIDE APPENDIX C/NUREG 4551 APPENDIX A
*
* ENDPOINTS OF THE RAIN DISTANCE INTERVALS (KILOMETERS)
*
* NOTE: THESE MUST BE CHOSEN TO MATCH THE SPATIAL ENDPOINT DISTANCES
* SPECIFIED FOR ARRAY SPAEND (10 % ERROR IS ALLOWED)
*
* 2.0 5.0 10.0 30.0 50.0 MILES
*
M4RNDSTS001 3.22 8.05 16.1 48.3 80.5 *KM
*
* NUMBER OF RAIN INTENSITY BREAKPOINTS
M4NRINTN001 3 * USER'S GUIDE APPENDIX C
*
* RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
*
M4RRRATE001 2.0 4.0 6.0 * USER'S GUIDE APPENDIX C
*
* NUMBER OF WEATHER SAMPLES PER BIN
* USER'S GUIDE APPENDIX C USED 4. MORE SAMPLES ARE PREFERRED, BUT THIS INCREASES
* COMPUTING TIME. USED 12 IN THIS ANALYSIS - MORE ACCURATE WITH REASONABLE RUN TIME
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X Non-Safety Related	Page	E.4-16 of E.4-20
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

M4NSMPLS001 12 *4 MINIMUM, 24 MAXIMUM
 *
 * INITIAL SEED FOR RANDOM NUMBER GENERATOR FOR WEATHER SAMPLING
 *
 M4IRSEED001 79

 * RELEASE DATA (2/2)

 *

 * SOURCE TERM NUMBER 1 OF 10

 *
 RDATNAM2001 'NCL' * SOURCE TITLE
 RDOALARM001 6.12E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
 RDPDELAY001 9.72E+03 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
 * RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
 RDRELFRC001 4.40E-02 0.0 2.30E-05 2.30E-05 0.0 0.0 0.0
 *

 * SOURCE TERM NUMBER 2 OF 10

 *
 RDATNAM2001 'Case 1' * SOURCE TITLE
 RDOALARM001 6.91E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.60E+03 * DURATION OF PLUMES
RDPDELAY001 7.20E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 4 Grp. 5 Grp. 6 Grp. 7
RDRELFRC001 1.00E+00 0.0 1.50E-07 1.30E-05 0.0 0.0 0.0
.
*****
* SOURCE TERM NUMBER 3 OF 10
*****
*
RDATNAM2001 'Case 2' * SOURCE TITLE
RDOALARM001 6.55E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.60E+03 * DURATION OF PLUMES
RDPDELAY001 6.84E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 4 Grp. 5 Grp. 6 Grp. 7
RDRELFRC001 1.00E+0 0.0 5.00E-06 5.00E-06 0.0 0.0 0.0
.
*****
* SOURCE TERM NUMBER 4 OF 10
*****
*
RDATNAM2001 'Case 3' * SOURCE TITLE
RDOALARM001 1.77E+05 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
RDPDELAY001 1.80E+05 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)

```



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page E.4-18 of E.4-20

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date

* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 4 Grp. 5 Grp. 6 Grp. 7

RDRELFRC001 1.00E+0 0.0 2.80E-04 2.20E-03 0.0 0.0 0.0

* SOURCE TERM NUMBER 5 OF 10

*

RDATNAM2001 'Case 4' * SOURCE TITLE

RDOALARM001 6.91E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED

RDNUMREL001 1 * NUMBER OF PLUMES MODELED

RDMAXRIS001 1 * RISK-DOMINANT PLUME

RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION

RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)

RDPLWHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)

RDPLUDUR001 3.60E+03 * DURATION OF PLUMES

RDPELAY001 7.20E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)

* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 4 Grp. 5 Grp. 6 Grp. 7

RDRELFRC001 1.00E+0 0.0 1.60E-03 1.60E-03 0.0 0.0 0.0

* SOURCE TERM NUMBER 6 OF 10

*

RDATNAM2001 'Case 5' * SOURCE TITLE

RDOALARM001 6.55E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED

RDNUMREL001 1 * NUMBER OF PLUMES MODELED

RDMAXRIS001 1 * RISK-DOMINANT PLUME

RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION

RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)

RDPLWHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)

RDPLUDUR001 3.60E+03 * DURATION OF PLUMES

RDPELAY001 6.84E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)

* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 4 Grp. 5 Grp. 6 Grp. 7

RDRELFRC001 1.00E+0 0.0 6.00E-03 5.30E-04 0.0 0.0 0.0

.



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X Non-Safety Related	Page	E.4-19 of E.4-20
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

 * SOURCE TERM NUMBER 7 OF 10

*
 RDATNAM2001 'Case 6' * SOURCE TITLE
 RDOALARM001 6.55E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
 RDPDELAY001 6.84E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
 * RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
 RDRELFRC001 1.00E+0 0.0 3.10E-02 7.70E-02 0.0 0.0 0.0

 * SOURCE TERM NUMBER 8 OF 10

*
 RDATNAM2001 'Case 7' * SOURCE TITLE
 RDOALARM001 6.91E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
 RDPDELAY001 7.20E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
 * RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
 RDRELFRC001 1.00E+0 0.0 8.90E-02 9.90E-02 0.0 0.0 0.0

 * SOURCE TERM NUMBER 9 OF 10



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*
RDATNAM2001 'Case 8' * SOURCE TITLE
RDOALARM001 4.32E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 4.18E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
RDPDELAY001 7.20E+03 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
RDRELFRC001 1.00E+00 1.90E-01 2.50E-01 0.0 0.0 0.0
.
*****
* SOURCE TERM NUMBER 10 OF 10
*****
*
RDATNAM2001 'Case 9' * SOURCE TITLE
RDOALARM001 4.39E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
RDPDELAY001 8.50E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
RDRELFRC001 1.00E+00 0.0 3.70E-01 3.60E-01 0.0 0.0 0.0
.

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	F-1	of F-19

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT F
ATMOS Input File Data (AP1000)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

*****
* FILE NAME: F.INP
*
* Sargent & Lundy (10/2009)
* The Plume Source Data is Based on Vogtle ESP MACCS2 AP1000 Analysis - See Attachment A.2
*
*****
* Run Identification (RI) Data
*****
* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT
*
RIATNAM1001 'AP1000 ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS '
*
*****
* GEOMETRY (GE) DATA
*****
* NUMBER OF RADIAL SPATIAL ELEMENTS
*
GENUMRAD001 10
*
* SPATIAL ENDPOINT DISTANCES IN MILES (MATCHES SITE FILE)
*
* END001 1 2 3 4 5
* END002 10 20 30 40 50
*
* SPATIAL ENDPOINT DISTANCES IN KILOMETERS
*
GESPAEND001 1.61 3.22 4.83 6.44 8.05
GESPAEND002 16.1 32.2 48.3 64.4 80.5
*
*****
* NUCLIDE DATA
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page F-3 of F-19

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

* * NUMBER OF PSEUDO-STABLE NUCLIDES DEFINED IN THE MODEL
 * * (USED TO TRUNCATE THE DECAY CHAINS) - USER'S GUIDE PG.C-1

ISNUMSTB001	27	LIST OF PSEUDO-STABLE NUCLIDES
ISNAMSTB001	I-129	(daughter of Te-129 and Te-129m)
ISNAMSTB002	Xe-131m	(daughter of I-131)
ISNAMSTB003	Xe-133m	(daughter of I-133)
ISNAMSTB004	Xe-135m	(daughter of I-135)
ISNAMSTB005	Cs-135	(daughter of Xe-135 and Xe-135m)
ISNAMSTB006	Sm-147	(daughter of Pm-147)
ISNAMSTB007	U-234	(daughter of Pu-238)
ISNAMSTB008	U-235	(daughter of Pu-239)
ISNAMSTB009	U-236	(daughter of Pu-240)
ISNAMSTB010	U-237	(daughter of Pu-241)
ISNAMSTB011	Np-237	(daughter of Am-241)
ISNAMSTB012	Rb-87	(daughter of Kr-87)
ISNAMSTB013	Ba-137m	(daughter of Cs-137)
ISNAMSTB014	Rb-88	(daughter of Kr-88)
ISNAMSTB015	Y-91m	(daughter of Sr-91)
ISNAMSTB016	Zr-93	(daughter of Y-93)
ISNAMSTB017	Nb-93m	(daughter of Zr-93)
ISNAMSTB018	Nb-95m	(daughter of Zr-95)
ISNAMSTB019	Nb-97	(daughter of Zr-97 and Nb-97m)
ISNAMSTB020	Nb-97m	(daughter of Zr-97)
ISNAMSTB021	Tc-99	(daughter of Mo-99)
ISNAMSTB022	Rh-103m	(daughter of Ru-103)
ISNAMSTB023	Rh-106	(daughter of Ru-106)
ISNAMSTB024	Te-131	(daughter of Te-131m)
ISNAMSTB025	Pr-144	(daughter of Ce-144 and Pr-144m)
ISNAMSTB026	Pr-144m	(daughter of Ce-144)
ISNAMSTB027	Pm-147	(daughter of Nd-147)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	F-4 of F-19
Non-Safety Related		Date	
Client PSEG Nuclear Development		Prepared by	
Project PSEG ESPA		Reviewed by	
Proj. No 12380-001		Approved by	
Equip. No.		Date	

* * NUMBER OF RADIOACTIVE NUCLIDES DEFINED IN THE MODEL

* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

* ISNUMISO001 60

* * NUMBER OF CHEMICAL ELEMENT GROUPS DEFINED IN THE MODEL

* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

* ISMAXGRP001 9

* GROUP 1 - NOBLE GASES

* GROUP 2 - IODINE

* GROUP 3 - CESIUM, RUBIDIUM

* GROUP 4 - TELLURIUM GROUP

* GROUP 5 - STRONTIUM

* GROUP 6 - MOLYBDENUM, COBALT, RUTHENIUM, TECHNETIUM

* GROUP 7 - LANTHANUM, YTTRIUM, NEODYMIUM, PROMETHIUM, AMERICIUM, CURIUM

* GROUP 8 - CERIUM, ACTINIDES (PLUTONIUM, NEPTUNIUM)

* GROUP 9 - BARIUM

* * WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP

* ALL NUCLIDE GROUPS EXCEPT NOBLE GAS ARE ASSUMED SUBJECT

* TO BOTH WET AND DRY DEPOSITION.

* USER'S GUIDE APPENDIX C

* WETDEP DRYDEP

* ISDEPFLA001 .FALSE. .FALSE.

* ISDEPFLA002 .TRUE. .TRUE.

* ISDEPFLA003 .TRUE. .TRUE.

* ISDEPFLA004 .TRUE. .TRUE.

* ISDEPFLA005 .TRUE. .TRUE.

* ISDEPFLA006 .TRUE. .TRUE.

* ISDEPFLA007 .TRUE. .TRUE.



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page F-5 of F-19

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

ISDEPFLA008 .TRUE. .TRUE.
 ISDEPFLA009 .TRUE. .TRUE.

*
 * CHEMICAL ELEMENT GROUP ASSIGNMENT
 * USER'S GUIDE APPENDIX C

	NUCNAM	IGROUP
ISOTPGRP001	Co-58	6
ISOTPGRP002	Co-60	6
ISOTPGRP003	Kr-85	1
ISOTPGRP004	Kr-85m	1
ISOTPGRP005	Kr-87	1
ISOTPGRP006	Kr-88	1
ISOTPGRP007	Rb-86	3
ISOTPGRP008	Sr-89	5
ISOTPGRP009	Sr-90	5
ISOTPGRP010	Sr-91	5
ISOTPGRP011	Sr-92	5
ISOTPGRP012	Y-90	7
ISOTPGRP013	Y-91	7
ISOTPGRP014	Y-92	7
ISOTPGRP015	Y-93	7
ISOTPGRP016	Zr-95	7
ISOTPGRP017	Zr-97	7
ISOTPGRP018	Nb-95	7
ISOTPGRP019	Mo-99	6
ISOTPGRP020	Tc-99m	6
ISOTPGRP021	Ru-103	6
ISOTPGRP022	Ru-105	6
ISOTPGRP023	Ru-106	6
ISOTPGRP024	Rh-105	6
ISOTPGRP025	Sb-127	4
ISOTPGRP026	Sb-129	4
ISOTPGRP027	Te-127	4



Calcs. For ENVIRONMENTAL CONSEQUENCE

ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev. 2 Date

Page F-6 of F-19

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

ISOTPPGRP028	Te-127m	4			
ISOTPPGRP029	Te-129	4			
ISOTPPGRP030	Te-129m	4			
ISOTPPGRP031	Te-131m	4			
ISOTPPGRP032	Te-132	4			
ISOTPPGRP033	I-131	2			
ISOTPPGRP034	I-132	2			
ISOTPPGRP035	I-133	2			
ISOTPPGRP036	I-134	2			
ISOTPPGRP037	I-135	2			
ISOTPPGRP038	Xe-133	1			
ISOTPPGRP039	Xe-135	1			
ISOTPPGRP040	Cs-134	3			
ISOTPPGRP041	Cs-136	3			
ISOTPPGRP042	Cs-137	3			
ISOTPPGRP043	Ba-139	9			
ISOTPPGRP044	Ba-140	9			
ISOTPPGRP045	La-140	7			
ISOTPPGRP046	La-141	7			
ISOTPPGRP047	La-142	7			
ISOTPPGRP048	Ce-141	8			
ISOTPPGRP049	Ce-143	8			
ISOTPPGRP050	Ce-144	8			
ISOTPPGRP051	Pr-143	7			
ISOTPPGRP052	Nd-147	7			
ISOTPPGRP053	Np-239	8			
ISOTPPGRP054	Pu-238	8			
ISOTPPGRP055	Pu-239	8			
ISOTPPGRP056	Pu-240	8			
ISOTPPGRP057	Pu-241	8			
ISOTPPGRP058	Am-241	7			
ISOTPPGRP059	Cm-242	7			
ISOTPPGRP060	Cm-244	7			

 *



Calcs. For **ENVIRONMENTAL CONSEQUENCE**
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page F-7 of F-19

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

```

* WET DEPOSITION (WD) DATA
*****
* WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR
*
WDCWASH1001 9.5E-5 *NUREG/CR-4551 PART 7, TABLE 2.9
*
* WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR
*
WDCWASH2001 0.8 *NUREG/CR-4551 PART 7, TABLE 2.9
*
*****
* DRY DEPOSITION (DD) DATA
*****
* NUMBER OF PARTICLE SIZE GROUPS
*
DDNPSGRP001 1 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
*
* DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
*
DDVDEPOS001 0.01 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
*
*****
* DISPERSION PARAMETER (DP) DATA
*****
* # OF DISTANCES IN PLUME-SIZE TABLES--WHICH CAN BE USED AS AN ALTERNATIVE TO
* THE POWER-LAW MODEL: (TO UTILIZE THE POWER-LAW MODEL, SET NUM_DIST TO ZERO
* OR DELETE THE FOLLOWING DATA CARD)
*
NUM_DIST001 0
*
* POWER-LAW FUNCTION IS OF FORM: SIGMA = A * X ** B
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	F-8 of F-19
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
		Prepared by	Date
		Reviewed by	Date
		Approved by	Date

* TADMOR ND GUR PARAMETRIZATION FOR DISTANCE RANGE 0.5 to 5.0 KM

* (NUREG/CR-4551 PART 7 TABLE 2.4)

* P-G CLASS: A B C D E F

DPCYSIGA001 0.3658 0.2751 0.2089 0.1474 0.1046 0.0722

DPCYSIGB001 0.9031 0.9031 0.9031 0.9031 0.9031 0.9031

DPCZSIGA001 2.5E-4 1.9E-3 0.2 0.3 0.4 0.2

DPCZSIGB001 2.125 1.6021 0.8543 0.6532 0.6021 0.6020

* LINEAR SCALING FACTOR FOR SIGMA-Y FUNCTION, NORMALLY 1

DPYSCALE001 1.0

* LINEAR SCALING FACTOR FOR SIGMA-Z FUNCTION,

* NORMALLY USED FOR SURFACE ROUGHNESS LENGTH CORRECTION.

* (Z1 / Z0) ** 0.2, FROM CRAC2 WE HAVE (10 CM / 3 CM) ** 0.2 = 1.27

* SEE NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

DPZSCALE001 1.27

* REF/BASIS:

* MACCS COMPUTES SIGMA-Y AND SIGMA-Z AS FOLLOWS:

* SIGMA-Y = A * X ** B

* SIGMA-Z = C * X ** D

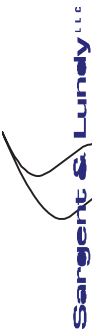
* THE SIGMA-Y COEFFICIENTS (A AND B) AND SIGMA-Z COEFFICIENTS (C AND D)

* ARE TAKEN FROM NUREG-4551, VOL. 2, REV. 1, PART 7, SECTION 2.4.

* NO SIGMA-Y SCALING IS REQUIRED/USED.

* SIGMA-Z SCALING VALUE CONSISTENT WITH SAMPLE PROBLEMS IN

* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* PLUME MEANDER EXPANSION FACTOR DATA

* TIME BASE FOR EXPANSION FACTOR (SECONDS)

* PMTIMBAS001 600.0 * 10 MINUTES

* BREAK POINT FOR FORMULA CHANGE (SECONDS)

* PMBRKPNT001 3600.0 * 1 HOUR

* EXPONENTIAL EXPANSION FACTOR NUMBER 1

* PMXPFAC1001 0.2

* EXPONENTIAL EXPANSION FACTOR NUMBER 2

* PMXPFAC2001 0.25

* REF/BASIS:

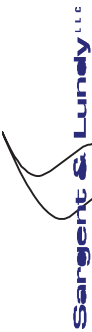
* ABOVE VALUES CONSISTENT WITH SECTION 2.3.2 FROM NUREG/CR-4551.

* PLUME RISE DATA

* THE FOLLOWING SCALING FACTORS COULD BE USED TO MODIFY THE MACCS METHOD OF PERFORMING PLUME RISE CALCS (IF DIFFERENT THAN 1).

* SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A BOUYANT PLUME (USED BY FUNCTION CAUGHT)

*

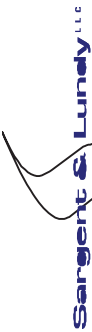


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	F-10 of F-19
Non-Safety Related		Prepared by	Date
Client	PSEG Nuclear Development	Reviewed by	Date
Project	PSEG ESPA	Approved by	Date
Proj. No	12380-001	Equip. No.	

```

PRSCLCRW001 1.0
*
* SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
* (USED BY FUNCTION PLMRIS)
*
PRSCCLADP001 1.0
*
* SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
* (USED BY FUNCTION PLMRIS)
*
PRSCLEFFP001 1.0
*
* REF/BASIS:
*
* THE SCALING FACTORS CAN BE USED TO MODIFY THE RESULTS OF THE HARD-WIRED
* PLUME RISE CALCULATIONS PERFORMED BY MACCS. THIS FUNCTIONALITY IS NOT UTILIZED
* IN THIS ANALYSIS (SCALING FACTORS SET TO 1).
*
*****
* WAKE EFFECTS DATA
*****
*
* DETERMINATION OF WAKE EFFECTS HAS BEEN REVISED FOR MACCS2. THE WIDTH VARIABLE
* IS NO LONGER INCLUDED. ADDITIONALLY, VALUES MUST BE INCLUDED FOR EACH PLUME.
*
* VENDOR DATA (ATTACHMENT A.2):
* BUILDING WIDTH = 39.62 m
* BUILDING HEIGHT = 65.63 m
*
* INITIAL VALUE FOR SIGMA-Y FOR EACH PLUME (4)
*
SIGYINIT001 9.21 9.21 9.21 9.21 *INITIAL SIGMA-Y = W/4.3
*
* INITIAL VALUE FOR SIGMA-Z FOR EACH PLUME (4)
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X	Page	F-11 of F-19
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

SIGZINIT001 30.53 30.53 30.53 30.53 *INITIAL SIGMA-Z = H/2.15

* BUILDING HEIGHT (METERS)

WEBUILDH001 65.63 65.63 65.63 65.63

* RELEASE DATA (1/2, SEE END OF FILE SECOND PORTION)

* PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP

* UNIFORM SIZE DISTRIBUTION IS ASSUMED FOR ALL 9 CHEMICAL GROUPS

* RDPDIST001 1.0

* RDPDIST002 1.0

* RDPDIST003 1.0

* RDPDIST004 1.0

* RDPDIST005 1.0

* RDPDIST006 1.0

* RDPDIST007 1.0

* RDPDIST008 1.0

* RDPDIST009 1.0

* AP1000 CORE INVENTORY BASED ON DCD - REV 17

* NUCNAM CORINV (Bq)

* THE INVENTORY AS GIVEN BELOW IS IN UNITS OF Ci, IT NEEDS TO BE IN UNITS OF Bq

* VARIABLE RDCORCA001 IS SET TO 3.7E+10 FOR THE NECESSARY UNIT CONVERSION (Ci to Bq)

* SEE USER'S GUIDE PG. 5-28

* RDCORINV001 Co-58 0.00E+00

* RDCORINV002 Co-60 0.00E+00

* RDCORINV003 Kr-85 1.06E+06

* RDCORINV004 Kr-85m 2.63E+07

* RDCORINV005 Kr-87 5.07E+07

* RDCORINV006 Kr-88 7.14E+07



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page F-12 of F-19

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

RDCORINV007	Rb-86	2.29E+05		
RDCORINV008	Sr-89	9.66E+07		
RDCORINV009	Sr-90	8.31E+06		
RDCORINV010	Sr-91	1.20E+08		
RDCORINV011	Sr-92	1.29E+08		
RDCORINV012	Y-90	8.66E+06		
RDCORINV013	Y-91	1.24E+08		
RDCORINV014	Y-92	1.30E+08		
RDCORINV015	Y-93	1.49E+08		
RDCORINV016	Zr-95	1.66E+08		
RDCORINV017	Zr-97	1.64E+08		
RDCORINV018	Nb-95	1.67E+08		
RDCORINV019	Mo-99	1.84E+08		
RDCORINV020	Tc-99m	1.61E+08		
RDCORINV021	Ru-103	1.45E+08		
RDCORINV022	Ru-105	9.83E+07		
RDCORINV023	Ru-106	4.77E+07		
RDCORINV024	Rh-105	9.00E+07		
RDCORINV025	Sb-127	1.03E+07		
RDCORINV026	Sb-129	3.10E+07		
RDCORINV027	Te-127	1.02E+07		
RDCORINV028	Te-127m	1.32E+06		
RDCORINV029	Te-129	3.04E+07		
RDCORINV030	Te-129m	4.50E+06		
RDCORINV031	Te-131m	1.40E+07		
RDCORINV032	Te-132	1.38E+08		
RDCORINV033	I-131	9.63E+07		
RDCORINV034	I-132	1.40E+08		
RDCORINV035	I-133	1.99E+08		
RDCORINV036	I-134	2.18E+08		
RDCORINV037	I-135	1.86E+08		
RDCORINV038	Xe-133	1.90E+08		
RDCORINV039	Xe-135	4.84E+07		
RDCORINV040	Cs-134	1.94E+07		
RDCORINV041	Cs-136	5.53E+06		



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

RDCORINV042 Cs-137 1.13E+07
RDCORINV043 Ba-139 1.78E+08
RDCORINV044 Ba-140 1.71E+08
RDCORINV045 La-140 1.82E+08
RDCORINV046 La-141 1.62E+08
RDCORINV047 La-142 1.57E+08
RDCORINV048 Ce-141 1.63E+08
RDCORINV049 Ce-143 1.52E+08
RDCORINV050 Ce-144 1.23E+08
RDCORINV051 Pr-143 1.46E+08
RDCORINV052 Nd-147 6.48E+07
RDCORINV053 Np-239 1.93E+09
RDCORINV054 Pu-238 3.83E+05
RDCORINV055 Pu-239 3.37E+04
RDCORINV056 Pu-240 4.94E+04
RDCORINV057 Pu-241 1.11E+07
RDCORINV058 Am-241 1.25E+04
RDCORINV059 Cm-242 2.95E+06
RDCORINV060 Cm-244 3.62E+05
  
```

* SCALING FACTOR TO ADJUST THE CORE INVENTORY

RDCORSCA001 3.7E+10 *SCALING FACTOR FOR CORE INVENTORY (Ci to Bq)

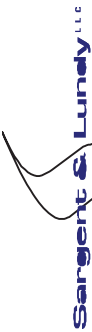
* DAUGHTER INGROWTH PRODUCTS RELEASED IN THE SAME PROPORTION AS THE PARENT

RDAPLFR001 PARENT

* OUTPUT CONTROL DATA

* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN

OCENDAT1001 .FALSE. *SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page F-14 of F-19

Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

```

OCIDEBUG001 0 *0 SKIPS DEBUG PRINTING
*
TYPEONUMBER 0 *VALUE = 0 = NO ATMOSPHERIC (TYPE 0) RESULTS PRINTED
*
*****
* METEOROLOGICAL SAMPLING DATA
*****
* METEOROLOGICAL SAMPLING OPTION CODE:
*
* METCOD = 1, USER SPECIFIED DAY AND HOUR IN THE YEAR (FROM MET FILE) ,
* 2, WEATHER CATEGORY BIN SAMPLING,
* 3, 120 HOURS OF WEATHER SPECIFIED ON THE ATMOS USER INPUT FILE,
* 4, CONSTANT MET (BOUNDARY WEATHER USED FROM THE START) ,
* 5, STRATIFIED RANDOM SAMPLES FOR EACH DAY OF THE YEAR.
*****
* METEOROLOGICAL SAMPLING (M1) DATA
*****
M1METCOD001 2 * MET FILE PROVIDED IN ATTACHMENT C
*
* LAST SPATIAL INTERVAL FOR MEASURED WEATHER
*
*****
* BOUNDARY WEATHER (M2) DATA
*****
M2LIMSPA001 10 * INTERVAL 10 = 50 MILES
*
* BOUNDARY WEATHER MIXING LAYER HEIGHT
*
M2BNDMXH001 1000. * METERS, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER STABILITY CLASS INDEX
*
M2IBDSTB001 4 * D-STABILITY, USER'S GUIDE APPENDIX C
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X	Page	F-15 of F-19
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

* BOUNDARY WEATHER RAIN RATE
*
M2BNDRAN001 5.0 * MM/HR, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER WIND SPEED
*
M2BNDWIND001 5.0 * M/S, USER'S GUIDE APPENDIX C
*
*****
* METEOROLOGICAL BIN SAMPLING (M4) DATA
*****
*
* NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
M4NRNINT001 5 * USER'S GUIDE APPENDIX C/NUREG 4551 APPENDIX A
*
* ENDPOINTS OF THE RAIN DISTANCE INTERVALS (KILOMETERS)
*
* NOTE: THESE MUST BE CHOSEN TO MATCH THE SPATIAL ENDPOINT DISTANCES
* SPECIFIED FOR ARRAY SPAEND (10 % ERROR IS ALLOWED)
*
* 2.0 5.0 10.0 30.0 50.0 MILES
*
M4RNDSTS001 3.22 8.05 16.1 48.3 80.5 *KM
*
* NUMBER OF RAIN INTENSITY BREAKPOINTS
*
M4NRINTN001 3 * USER'S GUIDE APPENDIX C
*
* RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
*
M4RRATE001 2.0 4.0 6.0 * USER'S GUIDE APPENDIX C
*
* NUMBER OF WEATHER SAMPLES PER BIN
* USER'S GUIDE APPENDIX C USED 4. MORE SAMPLES ARE PREFERRED, BUT THIS INCREASES
* COMPUTING TIME. USED 12 IN THIS ANALYSIS - MORE ACCURATE WITH REASONABLE RUN TIME

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	F-16	of	F-19

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

* M4NSMPLS001 12 *4 MINIMUM, 24 MAXIMUM

* * INITIAL SEED FOR RANDOM NUMBER GENERATOR FOR WEATHER SAMPLING

* M4IRSEED001 79

* RELEASE DATA (2/2)

* THIS PORTION OF INPUT IS BASED ON VOGTLE DATA - ATTACHMENT A.2

* SOURCE TERM NUMBER 1 OF 6

RDATNAM2001 'CFI'

RDOALARM001 2924.0 * value provided by Westinghouse for all source terms

RDNUMREL001 4 *four plume segments

RDMAXRIS001 1 *first plume segment carries greatest risk

RDMAXRIS001 0.5 0.5 0.5 0.5

RDPLHEAT001 0.0 0.0 0.0 0.0 *neglects buoyant plume rise

RDPLHITE001 0.0 0.0 0.0 0.0 *Release height of each plume (meters above grade)

RDPLUDUR001 29666.0 36000.0 36000.0 36000.0 *Pl dur=Tb149-2 values But lim to 10 hrs

RDPDELAY001 2924.0 32590.0 86420.0 172800.0 *start at Table 49-2 values

* XE/KR I CS TE(SB) SR RU(MO) LA CE BA

RDRELFRC001 5.40E-01 3.19E-03 3.18E-03 4.18E-04 2.11E-02 9.11E-03 3.53E-03 2.64E-05 1.62E-02

RDRELFRC002 2.58E-01 1.35E-04 1.67E-05 6.50E-04 1.68E-04 4.53E-03 1.68E-05 3.40E-04

RDRELFRC003 8.40E-02 0.00E0 0.00E0 4.47E-06 0.00E0 0.00E0 6.00E-03 2.17E-05 0.00E0

RDRELFRC004 3.83E-02 0.00E0 0.00E0 1.57E-06 0.00E0 0.00E0 5.22E-03 1.89E-05 0.00E0

* SOURCE TERM NUMBER 2 OF 6

RDATNAM2001 'CFE'

RDOALARM001 3004.0

RDNUMREL001 4 *four plume segments

RDMAXRIS001 1 *first plume segment carries greatest risk



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page F-17 of F-19

Client PSEG Nuclear Development	Safety Related X	Non-Safety Related
Project PSEG ESPA	Prepared by	
Proj. No 12380-001	Reviewed by	
Equip. No.	Approved by	
	Date	Date
	Date	Date

```

*RDREFTIM001 *defined in source term 1
*RDPLHEAT001 *defined in source term 1
*RDPLHITE001 *defined in source term 1
RDPLUDUR001 16806.0 36000.0 36000.0 36000.0 *Pl dur=Tbl49-2 values But lim to 10 hrs
RDPDELAY001 3004.0 19810.0 89970.0 176300.0 *start at Table 49-2 seconds after scram
* XE/KR I CS TE(SB) SR RU(MO) LA CE BA
RDRELFRC001 4.16E-01 5.53E-02 5.37E-02 1.23E-03 3.14E-03 1.16E-02 5.57E-05 9.54E-07 4.63E-03
RDRELFRC002 4.05E-01 1.26E-03 1.21E-03 1.61E-04 3.43E-04 2.58E-03 9.66E-06 4.56E-08 6.45E-04
RDRELFRC003 1.08E-01 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
RDRELFRC004 3.43E-02 0.00E0 0.00E0 6.04E-07 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
.
***** SOURCE TERM NUMBER 3 OF 6 *****
* SOURCE TERM NUMBER 3 OF 6
*
RDATNAM2001 'IC'
RDOALARM001 4378.0
RDNUMREL001 4 *four plume segments
RDMAXRIS001 1 *first plume segment carries greatest risk
*RDREFTIM001 *defined in source term 1
*RDPLHEAT001 *defined in source term 1
*RDPLHITE001 *defined in source term 1
RDPLUDUR001 36000.0 36000.0 36000.0 36000.0 *Pl dur=Tbl49-2 values But lim to 10 hrs
RDPDELAY001 4378.0 84810.0 134400.0 177600.0 *start at Table 49-2 seconds after scram
* XE/KR I CS TE(SB) SR RU(MO) LA CE BA
RDRELFRC001 9.83E-04 1.20E-05 1.15E-05 8.04E-07 1.07E-05 1.31E-05 1.35E-06 5.85E-09 1.20E-05
RDRELFRC002 4.93E-04 0.00E0 0.00E0 4.83E-09 0.00E0 0.00E0 6.00E-09 3.20E-11 0.00E0
RDRELFRC003 3.94E-04 0.00E0 0.00E0 1.21E-09 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
RDRELFRC004 7.72E-04 0.00E0 0.00E0 6.04E-10 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
.
***** SOURCE TERM NUMBER 4 OF 6 *****
* SOURCE TERM NUMBER 4 OF 6
*
RDATNAM2001 'BP'
RDOALARM001 31890.0
RDNUMREL001 4 *four plume segments

```




**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page F-18 of F-19

Client PSEG Nuclear Development	Safety Related X	Non-Safety Related
Project PSEG ESPA	Prepared by	
Proj. No 12380-001	Reviewed by	
Equip. No.	Approved by	
	Date	Date
	Date	Date
	Date	Date

RDMAXRIS001 1 *first plume segment carries greatest risk
 *RDREFTIM001 *defined in source term 1
 *RDPLHEAT001 *defined in source term 1
 *RDPLHITE001 *defined in source term 1
 RDPLUDUR001 14550.0 36000.0 36000.0 36000.0 *Pl dur=Tbl49-2 values But lim to 10 hrs
 RDPDELAY001 31890.0 46440.0 86490.0 172800.0 *start at Table 49-2 seconds after scram
 * XE/KR I CS TE(SB) SR RU(MO) LA CE BA
 RDRELFRC001 1.00E0 1.69E-01 1.62E-01 6.27E-03 3.57E-03 4.48E-02 1.30E-04 3.19E-06 8.93E-03
 RDRELFRC002 0.00E0 4.64E-02 3.38E-02 3.12E-03 0.00E0 0.00E0 0.00E0 0.00E0 2.00E-06
 RDRELFRC003 0.00E0 2.31E-01 6.60E-02 5.32E-03 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
 RDRELFRC004 0.00E0 2.80E-03 9.96E-03 1.57E-03 0.00E0 0.00E0 0.00E0 1.00E-06 0.00E0

***** RELEASE DATA BLOCK *****
 * SOURCE TERM NUMBER 5 OF 6
 *

RDATNAM2001 'CI'
 RDOALARM001 101.0
 RDNUMREL001 4 *four plume segments
 RDMAXRIS001 1 *first plume segment carries greatest risk
 *RDREFTIM001 *defined in source term 1
 *RDPLHEAT001 *defined in source term 1
 *RDPLHITE001 *defined in source term 1
 RDPLUDUR001 36000.0 36000.0 36000.0 36000.0 *Pl dur=Tbl49-2 values But lim to 10 hrs
 RDPDELAY001 101.0 50020.0 136400.0 211700.0 *start at Table 49-2 seconds after scram
 * XE/KR I CS TE(SB) SR RU(MO) LA CE BA
 RDRELFRC001 5.73E-01 4.56E-02 2.10E-02 1.64E-03 2.03E-02 4.04E-02 2.39E-04 2.97E-06 3.16E-02
 RDRELFRC002 1.13E-01 0.00E0 0.00E0 1.15E-05 0.00E0 0.00E0 1.00E-07 0.00E0 0.00E0
 RDRELFRC003 5.66E-02 0.00E0 0.00E0 8.10E-05 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
 RDRELFRC004 2.74E-02 0.00E0 0.00E0 1.27E-05 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0

***** RELEASE DATA BLOCK *****
 * SOURCE TERM NUMBER 6 OF 6
 *

RDATNAM2001 'CFL'
 RDOALARM001 2922.0



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page F-19 of F-19

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

RDNUMREL001 4 *four plume segments
 RDMAXRIS001 3 *third segment is largest noble gas/i/cs release
 *RDREFTIM001 *defined in source term 1
 *RDPLHEAT001 *defined in source term 1
 *RDPLHITE001 *defined in source term 1
 RDPLUDUR001 23438.0 36000.0 36000.0 36000.0 *Pl dur=Tbl49-2 values But lim to 10 hrs
 RDPDELAY001 2922.0 26360.0 108000.0 194400.0 *start at Table 49-2 seconds after scram
 * XE/KR I CS TE(SB) SR RU(MO) LA CE BA
 RDRELFRC001 3.36E-04 1.20E-05 1.15E-05 1.00E-06 1.57E-05 1.68E-05 9.96E-07 7.41E-09 1.61E-05
 RDRELFRC002 1.19E-03 5.00E-08 3.23E-08 1.75E-08 1.04E-06 2.90E-07 1.07E-05 4.05E-08 6.60E-07
 RDRELFRC003 9.79E-01 2.13E-05 1.16E-05 2.47E-05 2.39E-03 1.26E-03 9.75E-02 3.68E-04 2.25E-03
 RDRELFRC004 0.00E0 0.00E0 2.56E-07 1.20E-05 4.42E-04 1.55E-04 4.39E-02 1.66E-04 3.46E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	G-1	of G-20

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT G
ATMOS Input File Data (US-APWR)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

*****
* FILE NAME: G.INP
*
* Sargent & Lundy (10/2009)
*
*****
* Run Identification (RI) Data
*****
* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT
*
RIATNAM1001 'US-APWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS '
*
*****
* GEOMETRY (GE) DATA
*****
* NUMBER OF RADIAL SPATIAL ELEMENTS
GENUMRAD001 10
*
* SPATIAL ENDPOINT DISTANCES IN MILES (MATCHES SITE FILE)
*
* END001 1 2 3 4 5
* END002 10 20 30 40 50
*
* SPATIAL ENDPOINT DISTANCES IN KILOMETERS
*
* GESPAEND001 1.61 3.22 4.83 6.44 8.05
* GESPAEND002 16.1 32.2 48.3 64.4 80.5
*
*****
* NUCLIDE DATA
*****
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222								
ANALYSIS FOR PSEG ESPA										
Safety Related	X	Non-Safety Related								
<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">Client PSEG Nuclear Development</td> <td style="width: 50%;">Prepared by</td> </tr> <tr> <td>Project PSEG ESPA</td> <td>Reviewed by</td> </tr> <tr> <td>Proj. No 12380-001</td> <td>Approved by</td> </tr> <tr> <td>Equip. No.</td> <td>Date</td> </tr> </table>			Client PSEG Nuclear Development	Prepared by	Project PSEG ESPA	Reviewed by	Proj. No 12380-001	Approved by	Equip. No.	Date
Client PSEG Nuclear Development	Prepared by									
Project PSEG ESPA	Reviewed by									
Proj. No 12380-001	Approved by									
Equip. No.	Date									
		Rev. 2 Date								
		Page G-3 of G-20								

* NUMBER OF PSEUDO-STABLE NUCLIDES DEFINED IN THE MODEL
 * (USED TO TRUNCATE THE DECAY CHAINS) - USER'S GUIDE PG.C-1

ISNUMSTB001 27

* LIST OF PSEUDO-STABLE NUCLIDES

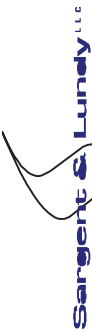
ISNUMSTB001	27	
ISNUMSTB001	I-129	(daughter of Te-129 and Te-129m)
ISNUMSTB002	Xe-131m	(daughter of I-131)
ISNUMSTB003	Xe-133m	(daughter of I-133)
ISNUMSTB004	Xe-135m	(daughter of I-135)
ISNUMSTB005	Cs-135	(daughter of Xe-135 and Xe-135m)
ISNUMSTB006	Sm-147	(daughter of Pm-147)
ISNUMSTB007	U-234	(daughter of Pu-238)
ISNUMSTB008	U-235	(daughter of Pu-239)
ISNUMSTB009	U-236	(daughter of Pu-240)
ISNUMSTB010	U-237	(daughter of Pu-241)
ISNUMSTB011	Np-237	(daughter of Am-241)
ISNUMSTB012	Rb-87	(daughter of Kr-87)
ISNUMSTB013	Ba-137m	(daughter of Cs-137)
ISNUMSTB014	Rb-88	(daughter of Kr-88)
ISNUMSTB015	Y-91m	(daughter of Sr-91)
ISNUMSTB016	Zr-93	(daughter of Y-93)
ISNUMSTB017	Nb-93m	(daughter of Zr-93)
ISNUMSTB018	Nb-95m	(daughter of Zr-95)
ISNUMSTB019	Nb-97	(daughter of Zr-97 and Nb-97m)
ISNUMSTB020	Nb-97m	(daughter of Zr-97)
ISNUMSTB021	Tc-99	(daughter of Mo-99)
ISNUMSTB022	Rh-103m	(daughter of Ru-103)
ISNUMSTB023	Rh-106	(daughter of Ru-106)
ISNUMSTB024	Te-131	(daughter of Te-131m)
ISNUMSTB025	Pr-144	(daughter of Ce-144 and Pr-144m)
ISNUMSTB026	Pr-144m	(daughter of Ce-144)
ISNUMSTB027	Pm-147	(daughter of Nd-147)

*



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	G-4 of G-20
Non-Safety Related		Prepared by	Date
Client PSEG Nuclear Development		Reviewed by	Date
Project PSEG ESPA		Approved by	Date
Proj. No 12380-001		Equip. No.	

* NUMBER OF RADIOACTIVE NUCLIDES DEFINED IN THE MODEL
 * NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
 *
 ISNUMISO001 60
 *
 * NUMBER OF CHEMICAL ELEMENT GROUPS DEFINED IN THE MODEL
 * NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
 *
 ISMAXGRP001 9
 *
 * GROUP 1 - NOBLE GASES
 * GROUP 2 - IODINE
 * GROUP 3 - CESIUM, RUBIDIUM
 * GROUP 4 - TELLURIUM GROUP
 * GROUP 5 - STRONTIUM
 * GROUP 6 - MOLYBDENUM, COBALT, RUTHENIUM, TECHNETIUM
 * GROUP 7 - LANTHANUM, YTTRIUM, NEODYMIUM, PROMETHIUM, AMERICIUM, CURIUM
 * GROUP 8 - CERIUM, ACTINIDES (PLUTONIUM, NEPTUNIUM)
 * GROUP 9 - BARIUM
 *
 * WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP
 * ALL NUCLIDE GROUPS EXCEPT NOBLE GAS ARE ASSUMED SUBJECT
 * TO BOTH WET AND DRY DEPOSITION.
 * USER'S GUIDE APPENDIX C
 *
 * WETDEP DRYDEP
 *
 ISDEPFLA001 .FALSE. .FALSE.
 ISDEPFLA002 .TRUE. .TRUE.
 ISDEPFLA003 .TRUE. .TRUE.
 ISDEPFLA004 .TRUE. .TRUE.
 ISDEPFLA005 .TRUE. .TRUE.
 ISDEPFLA006 .TRUE. .TRUE.
 ISDEPFLA007 .TRUE. .TRUE.
 ISDEPFLA008 .TRUE. .TRUE.



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	G-5 of G-20
Non-Safety Related		Date	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
		Prepared by	Date
		Reviewed by	Date
		Approved by	Date

ISDEPFLA009	.TRUE.	.TRUE.	.TRUE.
* CHEMICAL ELEMENT GROUP ASSIGNMENT			
* USER'S GUIDE APPENDIX C			
* NUCNAM	IGROUP		
ISOTFGRP001	Co-58	6	
ISOTFGRP002	Co-60	6	
ISOTFGRP003	Kr-85	1	
ISOTFGRP004	Kr-85m	1	
ISOTFGRP005	Kr-87	1	
ISOTFGRP006	Kr-88	1	
ISOTFGRP007	Rb-86	3	
ISOTFGRP008	Sr-89	5	
ISOTFGRP009	Sr-90	5	
ISOTFGRP010	Sr-91	5	
ISOTFGRP011	Sr-92	5	
ISOTFGRP012	Y-90	7	
ISOTFGRP013	Y-91	7	
ISOTFGRP014	Y-92	7	
ISOTFGRP015	Y-93	7	
ISOTFGRP016	Zr-95	7	
ISOTFGRP017	Zr-97	7	
ISOTFGRP018	Nb-95	7	
ISOTFGRP019	Mo-99	6	
ISOTFGRP020	Tc-99m	6	
ISOTFGRP021	Ru-103	6	
ISOTFGRP022	Ru-105	6	
ISOTFGRP023	Ru-106	6	
ISOTFGRP024	Rh-105	6	
ISOTFGRP025	Sb-127	4	
ISOTFGRP026	Sb-129	4	
ISOTFGRP027	Te-127	4	
ISOTFGRP028	Te-127m	4	



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

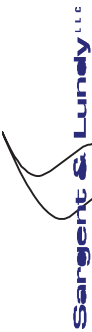
Safety Related X Non-Safety Related

Page G-6 of G-20

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

ISOTGRRP029	Te-129	4		
ISOTGRRP030	Te-129m	4		
ISOTGRRP031	Te-131m	4		
ISOTGRRP032	Te-132	4		
ISOTGRRP033	I-131	2		
ISOTGRRP034	I-132	2		
ISOTGRRP035	I-133	2		
ISOTGRRP036	I-134	2		
ISOTGRRP037	I-135	2		
ISOTGRRP038	Xe-133	1		
ISOTGRRP039	Xe-135	1		
ISOTGRRP040	Cs-134	3		
ISOTGRRP041	Cs-136	3		
ISOTGRRP042	Cs-137	3		
ISOTGRRP043	Ba-139	9		
ISOTGRRP044	Ba-140	9		
ISOTGRRP045	La-140	7		
ISOTGRRP046	La-141	7		
ISOTGRRP047	La-142	7		
ISOTGRRP048	Ce-141	8		
ISOTGRRP049	Ce-143	8		
ISOTGRRP050	Ce-144	8		
ISOTGRRP051	Pr-143	7		
ISOTGRRP052	Nd-147	7		
ISOTGRRP053	Np-239	8		
ISOTGRRP054	Pu-238	8		
ISOTGRRP055	Pu-239	8		
ISOTGRRP056	Pu-240	8		
ISOTGRRP057	Pu-241	8		
ISOTGRRP058	Am-241	7		
ISOTGRRP059	Cm-242	7		
ISOTGRRP060	Cm-244	7		

 * WET DEPOSITION (WD) DATA



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
Rev. 2 Date
Page G-7 of G-20

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
Prepared by	Date	
Reviewed by	Date	
Approved by	Date	

```

*****
*
* WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR
*
WDCWASH1001 9.5E-5 *NUREG/CR-4551 PART 7, TABLE 2.9
*
* WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR
*
WDCWASH2001 0.8 *NUREG/CR-4551 PART 7, TABLE 2.9
*
*****
* DRY DEPOSITION (DD) DATA
*
*****
* NUMBER OF PARTICLE SIZE GROUPS
*
DDNPSGRP001 1 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
*
* DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
*
DDVDEPOS001 0.01 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
*
*****
* DISPERSION PARAMETER (DP) DATA
*****
* # OF DISTANCES IN PLUME-SIZE TABLES--WHICH CAN BE USED AS AN ALTERNATIVE TO
* THE POWER-LAW MODEL: (TO UTILIZE THE POWER-LAW MODEL, SET NUM_DIST TO ZERO
* OR DELETE THE FOLLOWING DATA CARD)
*
NUM_DIST001 0
*
* POWER-LAW FUNCTION IS OF FORM: SIGMA = A * X ** B
*
* TADMOR ND GUR PARAMETRIZATION FOR DISTANCE RANGE 0.5 to 5.0 KM

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	G-8 of G-20

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

	A	B	C	D	E	F
* P-G CLASS:						
DPCYSIGA001	0.3658	0.2751	0.2089	0.1474	0.1046	0.0722
DPCYSIGB001	0.9031	0.9031	0.9031	0.9031	0.9031	0.9031
DPCZSIGA001	2.5E-4	1.9E-3	0.2	0.3	0.4	0.2
DPCZSIGB001	2.125	1.6021	0.8543	0.6532	0.6021	0.6020
* LINEAR SCALING FACTOR FOR SIGMA-Y FUNCTION, NORMALLY 1						
DPYSCALE001	1.0					
* LINEAR SCALING FACTOR FOR SIGMA-Z FUNCTION,						
* NORMALLY USED FOR SURFACE ROUGHNESS LENGTH CORRECTION.						
* (Z1 / Z0) ** 0.2, FROM CRAC2 WE HAVE (10 CM / 3 CM) ** 0.2 = 1.27						
* SEE NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C						
DPZSCALE001	1.27					
* REF/BASIS:						
* MACCS COMPUTES SIGMA-Y AND SIGMA-Z AS FOLLOWS:						
* SIGMA-Y = A * X ** B						
* SIGMA-Z = C * X ** D						
* THE SIGMA-Y COEFFICIENTS (A AND B) AND SIGMA-Z COEFFICIENTS (C AND D)						
* ARE TAKEN FROM NUREG-4551, VOL. 2, REV. 1, PART 7, SECTION 2.4.						
* NO SIGMA-Y SCALING IS REQUIRED/USED.						
* SIGMA-Z SCALING VALUE CONSISTENT WITH SAMPLE PROBLEMS IN						
* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C						



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* PLUME MEANDER EXPANSION FACTOR DATA

* TIME BASE FOR EXPANSION FACTOR (SECONDS)

* PMTIMBAS001 600.0 * 10 MINUTES

* BREAK POINT FOR FORMULA CHANGE (SECONDS)

* PMBRKPNT001 3600.0 * 1 HOUR

* EXPONENTIAL EXPANSION FACTOR NUMBER 1

* PMXPFFAC1001 0.2

* EXPONENTIAL EXPANSION FACTOR NUMBER 2

* PMXPFFAC2001 0.25

* REF/BASIS:

* ABOVE VALUES CONSISTENT WITH SECTION 2.3.2 FROM NUREG/CR-4551.

* PLUME RISE DATA

* THE FOLLOWING SCALING FACTORS COULD BE USED TO MODIFY THE MACCS METHOD OF PERFORMING PLUME RISE CALCS (IF DIFFERENT THAN 1).

* SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A BOUYANT PLUME (USED BY FUNCTION CAUGHT)

* PRSCLCRW001 1.0

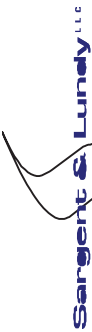


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	G-10 of G-20
Non-Safety Related		Prepared by	Date
Client	PSEG Nuclear Development	Reviewed by	Date
Project	PSEG ESPA	Approved by	Date
Proj. No	12380-001	Equip. No.	

```

*
* SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
* (USED BY FUNCTION PLMRIS)
*
PRSLADP001 1.0
*
* SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
* (USED BY FUNCTION PLMRIS)
*
PRSCLEFP001 1.0
*
* REF/BASIS:
*
* THE SCALING FACTORS CAN BE USED TO MODIFY THE RESULTS OF THE HARD-WIRED
* PLUME RISE CALCULATIONS PERFORMED BY MACCS. THIS FUNCTIONALITY IS NOT UTILIZED
* IN THIS ANALYSIS (SCALING FACTORS SET TO 1).
*
*****
* WAKE EFFECTS DATA
*****
*
* DETERMINATION OF WAKE EFFECTS HAS BEEN REVISED FOR MACCS2. THE WIDTH VARIABLE
* IS NO LONGER INCLUDED. ADDITIONALLY, VALUES MUST BE INCLUDED FOR EACH PLUME.
*
* VENDOR DATA (ATTACHMENT A.3):
* BUILDING WIDTH = 48.1 m
* BUILDING HEIGHT = 64.7 m
*
* INITIAL VALUE FOR SIGMA-Y FOR EACH PLUME (4)
*
SIGYINIT001 11.2 11.2 11.2 11.2 *INITIAL SIGMA-Y = W/4.3 = 48.1/4.3 = 11.2
*
* INITIAL VALUE FOR SIGMA-Z FOR EACH PLUME (4)
*
SIGZINIT001 30.1 30.1 30.1 30.1 *INITIAL SIGMA-Z = H/2.15 = 64.7/2.15 = 30.1

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	G-11 of G-20
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* BUILDING HEIGHT (METERS)

* WEBUILDH001 64.7 64.7 64.7 64.7

* RELEASE DATA (1/2, SEE END OF FILE SECOND PORTION)

* PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP

* UNIFORM SIZE DISTRIBUTION IS ASSUMED FOR ALL 9 CHEMICAL GROUPS

RDPDIST001	1.0
RDPDIST002	1.0
RDPDIST003	1.0
RDPDIST004	1.0
RDPDIST005	1.0
RDPDIST006	1.0
RDPDIST007	1.0
RDPDIST008	1.0
RDPDIST009	1.0

* US - APWR CORE INVENTORY BASED ON VENDOR DATA (ATTACHMENT A.3)

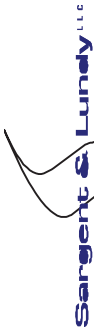
* NUCNAM CORINV (Bq)

* THE INVENTORY AS GIVEN BELOW IS IN UNITS OF Ci, IT NEEDS TO BE IN UNITS OF Bq

* VARIABLE RDCORCA001 IS SET TO 3.7E+10 FOR THE NECESSARY UNIT CONVERSION (Ci to Bq)

* SEE USER'S GUIDE PG. 5-28

RDCORINV001	Co-58	0.00E+00
RDCORINV002	Co-60	4.26E+05
RDCORINV003	Kr-85	1.70E+06
RDCORINV004	Kr-85m	3.04E+07
RDCORINV005	Kr-87	5.79E+07
RDCORINV006	Kr-88	8.14E+07
RDCORINV007	Rb-86	3.33E+05



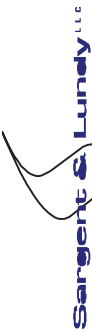
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page G-12 of G-20

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

RDCORINV008	Sr-89	1.11E+08			
RDCORINV009	Sr-90	1.36E+07			
RDCORINV010	Sr-91	1.38E+08			
RDCORINV011	Sr-92	1.50E+08			
RDCORINV012	Y-90	1.44E+07			
RDCORINV013	Y-91	1.44E+08			
RDCORINV014	Y-92	1.51E+08			
RDCORINV015	Y-93	1.76E+08			
RDCORINV016	Zr-95	2.07E+08			
RDCORINV017	Zr-97	2.10E+08			
RDCORINV018	Nb-95	2.09E+08			
RDCORINV019	Mo-99	2.27E+08			
RDCORINV020	Tc-99m	1.99E+08			
RDCORINV021	Ru-103	1.90E+08			
RDCORINV022	Ru-105	1.32E+08			
RDCORINV023	Ru-106	7.38E+07			
RDCORINV024	Rh-105	1.23E+08			
RDCORINV025	Sb-127	1.34E+07			
RDCORINV026	Sb-129	3.95E+07			
RDCORINV027	Te-127	1.33E+07			
RDCORINV028	Te-127m	1.77E+06			
RDCORINV029	Te-129	3.89E+07			
RDCORINV030	Te-129m	5.80E+06			
RDCORINV031	Te-131m	1.76E+07			
RDCORINV032	Te-132	1.71E+08			
RDCORINV033	I-131	1.21E+08			
RDCORINV034	I-132	1.74E+08			
RDCORINV035	I-133	2.43E+08			
RDCORINV036	I-134	2.66E+08			
RDCORINV037	I-135	2.27E+08			
RDCORINV038	Xe-133	2.44E+08			
RDCORINV039	Xe-135	6.89E+07			
RDCORINV040	Cs-134	3.32E+07			
RDCORINV041	Cs-136	9.05E+06			
RDCORINV042	Cs-137	1.89E+07			



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page G-13 of G-20

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

RDCORINV043	Ba-139	2.16E+08
RDCORINV044	Ba-140	2.09E+08
RDCORINV045	La-140	2.18E+08
RDCORINV046	La-141	1.97E+08
RDCORINV047	La-142	1.90E+08
RDCORINV048	Ce-141	1.99E+08
RDCORINV049	Ce-143	1.82E+08
RDCORINV050	Ce-144	1.61E+08
RDCORINV051	Pr-143	1.79E+08
RDCORINV052	Nd-147	7.97E+07
RDCORINV053	Np-239	2.54E+09
RDCORINV054	Pu-238	7.32E+05
RDCORINV055	Pu-239	5.53E+04
RDCORINV056	Pu-240	8.67E+04
RDCORINV057	Pu-241	1.92E+07
RDCORINV058	Am-241	2.59E+04
RDCORINV059	Cm-242	6.42E+06
RDCORINV060	Cm-244	7.80E+05

```

* SCALING FACTOR TO ADJUST THE CORE INVENTORY
*
* RDCORSCA001 3.7E+10 *SCALING FACTOR FOR CORE INVENTORY (Ci to Bq)
*
* DAUGHTER INGROWTH PRODUCTS RELEASED IN THE SAME PROPORTION AS THE PARENT
*
RDAPLFR001 PARENT
*
*****
* OUTPUT CONTROL DATA
*****
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
*
OCENDAT1001 .FALSE. *SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC)
*
OCIDEBUG001 0 *0 SKIPS DEBUG PRINTING

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page G-14 of G-20

Safety Related Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

```

*
* TYPE0NUMBER      0  *VALUE = 0 = NO ATMOSPHERIC (TYPE 0) RESULTS PRINTED
*
*
*
* METEOROLOGICAL SAMPLING DATA
*
* METEOROLOGICAL SAMPLING OPTION CODE:
*
* METCOD = 1, USER SPECIFIED DAY AND HOUR IN THE YEAR (FROM MET FILE) ,
* 2, WEATHER CATEGORY BIN SAMPLING,
* 3, 120 HOURS OF WEATHER SPECIFIED ON THE ATMOS USER INPUT FILE,
* 4, CONSTANT MET (BOUNDARY WEATHER USED FROM THE START),
* 5, STRATIFIED RANDOM SAMPLES FOR EACH DAY OF THE YEAR.
*
* METEOROLOGICAL SAMPLING (M1) DATA
*
M1METCOD001  2  * MET FILE PROVIDED IN ATTACHMENT C
*
* LAST SPATIAL INTERVAL FOR MEASURED WEATHER
*
*
* BOUNDARY WEATHER (M2) DATA
*
M2LIMSPA001  10  * INTERVAL 10 = 50 MILES
*
* BOUNDARY WEATHER MIXING LAYER HEIGHT
*
M2BNDMXH001  1000.0  * METERS, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER STABILITY CLASS INDEX
*
M2IBDSTB001  4  * D-STABILITY, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER RAIN RATE

```




**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No.	2009-11222		
Rev.	2	Date	
Page	G-15	of	G-20

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	
Prepared by	Date
Reviewed by	Date
Approved by	Date

```

* M2BNDRAN001 5.0 * MM/HR, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER WIND SPEED
*
M2BNDWIND001 5.0 * M/S, USER'S GUIDE APPENDIX C
*
*****
* METEOROLOGICAL BIN SAMPLING (M4) DATA
*****
*
* NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
M4NRNINT001 5 * USER'S GUIDE APPENDIX C/NUREG 4551 APPENDIX A
*
* ENDPOINTS OF THE RAIN DISTANCE INTERVALS (KILOMETERS)
*
* NOTE: THESE MUST BE CHOSEN TO MATCH THE SPATIAL ENDPOINT DISTANCES
* SPECIFIED FOR ARRAY SPAEND (10 % ERROR IS ALLOWED)
*
* 2.0 5.0 10.0 30.0 50.0 MILES
*
M4RNDSTS001 3.22 8.05 16.1 48.3 80.5 *KM
*
* NUMBER OF RAIN INTENSITY BREAKPOINTS
M4NRINTN001 3 * USER'S GUIDE APPENDIX C
*
* RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
M4RRRATE001 2. 4. 6. * USER'S GUIDE APPENDIX C
*
* NUMBER OF WEATHER SAMPLES PER BIN
* USER'S GUIDE APPENDIX C USED 4. MORE SAMPLES ARE PREFERRED, BUT THIS INCREASES
* COMPUTING TIME. USED 12 IN THIS ANALYSIS - MORE ACCURATE WITH REASONABLE RUN TIME
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X Non-Safety Related	Page	G-16 of G-20
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

M4NSMPLS001 12 *4 MINIMUM, 24 MAXIMUM

* INITIAL SEED FOR RANDOM NUMBER GENERATOR FOR WEATHER SAMPLING

M4IRSEED001 79

* RELEASE DATA (2/2)

* SOURCE TERM NUMBER 1 OF 6

* SOURCE TERM NUMBER 2 OF 6

RDATNAM2001 'RC1' * SOURCE TITLE

RDOALARM001 1.05E+05 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED

RDNUMREL001 4 * NUMBER OF PLUMES MODELED

RDMAXRIS001 1 * RISK-DOMINANT PLUME

RDREFTIM001 0.5 0.5 0.5 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION

RDPLHEAT001 0.0 0.0 0.0 0.0 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)

RDPLHITE001 0.0 0.0 0.0 0.0 * RELEASE HEIGHT OF EACH PLUME (METERS)

RDPLUDUR001 1.52E+04 3.60E+04 3.60E+04 3.60E+04 * DURATION OF PLUMES

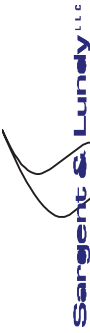
RDPELAY001 1.02E+05 1.17E+05 1.53E+05 2.39E+05 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)

	Xe/Kr	I	Cs	Te	Sr	Ru	La	Ce	Ba
RDRELFRC001	6.88E-01	1.96E-01	1.56E-01	8.55E-02	3.49E-04	1.45E-02	1.47E-05	4.34E-05	2.90E-03
RDRELFRC002	2.48E-01	8.73E-02	3.91E-02	3.91E-02	4.55E-03	3.87E-03	2.25E-04	2.38E-04	8.82E-03
RDRELFRC003	2.72E-03	4.03E-03	8.47E-03	7.88E-03	3.71E-03	4.21E-03	2.12E-03	1.35E-03	3.50E-03
RDRELFRC004	4.87E-03	2.29E-03	2.66E-03	6.09E-04	1.85E-04	7.59E-04	6.23E-04	5.30E-04	9.68E-05

* SOURCE TERM NUMBER 2 OF 6

RDATNAM2001 'RC2' * SOURCE TITLE

RDOALARM001 1.16E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
Rev. 2 Date
Page G-17 of G-20

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	Safety Related	Non-Safety Related
	X	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

RDNUMREL001 4 *NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 0.5 0.5 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 0.0 0.0 0.0 0.0 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 0.0 0.0 0.0 0.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.28E+04 3.60E+04 3.60E+04 3.60E+04 * DURATION OF PLUMES
RDPDELAY001 9.01E+03 4.18E+04 9.50E+04 1.63E+05 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)

	Xe/Kr	I	Cs	Te	Sr	Ru	La	Ce	Ba
RDRELFRC001	7.31E-01	3.61E-02	2.13E-02	3.56E-02	5.14E-03	1.50E-03	3.62E-03	1.95E-03	8.12E-03
RDRELFRC002	2.38E-01	3.22E-02	4.19E-03	7.24E-03	2.61E-04	7.07E-04	4.01E-04	3.65E-04	4.38E-04
RDRELFRC003	2.20E-02	1.65E-01	1.16E-02	2.86E-02	1.23E-03	4.00E-05	5.18E-05	1.58E-04	1.50E-03
RDRELFRC004	5.37E-03	4.70E-02	5.46E-03	5.88E-03	1.11E-03	6.12E-05	5.64E-05	2.47E-04	1.11E-03

*
*

* SOURCE TERM NUMBER 3 OF 6

*
RDATNAM2001 'RC3'
RDOALARM001 1.72E+05
*
RDNUMREL001 4
RDMAXRIS001 1
RDREFTIM001 0.5 0.5 0.5 0.5
*
*
RDPLHEAT001 0.0 0.0 0.0 0.0
RDPLHITE001 0.0 0.0 0.0 0.0
RDPLUDUR001 3.60E+04 3.60E+04 3.60E+04 3.60E+04
RDPDELAY001 1.70E+05 2.11E+05 2.55E+05 3.39E+05
*
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
RDRELFRC001 9.38E-01 4.70E-01 4.58E-01 4.19E-01 4.22E-02 2.71E-01 1.49E-03 6.33E-03 1.02E-01
RDRELFRC002 4.74E-02 8.37E-03 6.51E-03 6.41E-03 1.77E-03 4.94E-03 6.60E-05 8.66E-05 3.49E-03

* SOURCE TITLE
* TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
* NUMBER OF PLUMES MODELED
* RISK-DOMINANT PLUME
* REPRESENTATIVE TIME POINT FOR DISPERSION
AND RADIOACTIVE DECAY (MIDPOINT)
* HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
* RELEASE HEIGHT OF EACH PLUME (METERS)
* DURATION OF PLUMES
* TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page G-18 of G-20

Safety Related X Non-Safety Related

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

RDRELFRC003 1.45E-03 1.03E-03 1.11E-03 2.84E-03 4.37E-04 1.84E-04 6.37E-06 6.00E-05 2.24E-04
RDRELFRC004 5.54E-04 2.46E-04 1.80E-05 1.49E-03 5.37E-05 0.00E+00 2.33E-07 2.75E-06 2.42E-05
*
*
*****
* SOURCE TERM NUMBER 4 OF 6
*****
*
RDATNAM2001 'RC4'
RDOALARM001 1.83E+04
*
RDNUMREL001 4
RDMAXRIS001 1
RDREFTIM001 0.5 0.5 0.5 0.5
*
*
RDPLHEAT001 0.0 0.0 0.0 0.0 0.0
RDPLHITE001 0.0 0.0 0.0 0.0 0.0
RDPLUDUR001 1.58E+04 3.17E+04 3.60E+04 3.60E+04
RDPDELAY001 7.80E+04 9.38E+04 1.25E+05 2.12E+05
*
*
Xe/Kr I Cs Te Sr Ru La Ce Ba
RDRELFRC001 9.98E-01 3.79E-02 3.29E-02 4.88E-02 4.53E-03 2.38E-02 1.21E-04 3.67E-04 2.29E-02
RDRELFRC002 1.56E-03 1.66E-02 8.59E-03 3.77E-03 3.05E-04 2.79E-03 6.78E-07 3.49E-06 5.64E-04
RDRELFRC003 2.72E-04 7.50E-03 3.40E-03 7.78E-03 1.32E-03 1.08E-05 1.51E-05 4.73E-04 4.69E-04
RDRELFRC004 1.04E-04 6.34E-03 1.11E-03 2.78E-03 1.51E-06 0.00E+0 3.05E-08 9.57E-07 9.97E-07
*
*
*****
* SOURCE TERM NUMBER 5 OF 6
*****
*
RDATNAM2001 'RC5'
RDOALARM001 1.16E+04
*
*
*****
* SOURCE TITLE
* TIME AFTER ACCIDENT INITIATION THAT OFF-SITE
ALARM IS INITIATED
* NUMBER OF PLUMES MODELED
* RISK-DOMINANT PLUME
* REPRESENTATIVE TIME POINT FOR
DISPERSION
AND RADIOACTIVE DECAY (MIDPOINT)
* HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
* RELEASE HEIGHT OF EACH PLUME (METERS)
* DURATION OF PLUMES
* TIME OF RELEASE FOR EACH PLUME
(SECONDS FROM SCRAM)
*****
* SOURCE TITLE
* TIME AFTER ACCIDENT INITIATION THAT OFF-SITE

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

```

*
RDNUMREL001 4
RDMAXRIS001 1
RDREFTIM001 0.5 0.5 0.5 0.5
*
*
RDPLHEAT001 0.0 0.0 0.0 0.0 0.0
RDPLHITE001 0.0 0.0 0.0 0.0 0.0
RDPLUDUR001 1.01E+04 3.60E+04 3.60E+04 3.60E+04
RDPDELAY001 1.89E+05 1.99E+05 2.59E+05 3.42E+05
*
*
Xe/Kr I Cs Te Sr Ru La Ce Ba
RDRELFRC001 9.28E-01 2.72E-03 1.06E-03 6.42E-03 8.05E-05 9.95E-05 2.99E-05 1.87E-05 6.61E-05
RDRELFRC002 3.53E-02 2.23E-02 4.21E-03 2.53E-03 1.45E-06 1.92E-06 5.29E-07 3.42E-07 1.60E-06
RDRELFRC003 1.83E-02 6.02E-02 8.03E-03 3.11E-03 5.15E-07 1.70E-06 5.69E-08 4.62E-08 1.30E-06
RDRELFRC004 6.47E-03 5.72E-02 6.42E-03 4.56E-03 1.64E-06 9.22E-07 2.10E-09 1.29E-08 3.67E-06
*
*
* SOURCE TERM NUMBER 6 OF 6
*****
*
RDATNAM2001 'RC6'
RDOALARM001 1.80E+03
*
RDNUMREL001 4
RDMAXRIS001 1
RDREFTIM001 0.5 0.5 0.5 0.5
*
*
RDPLHEAT001 0.0 0.0 0.0 0.0 0.0
RDPLHITE001 0.0 0.0 0.0 0.0 0.0
RDPLUDUR001 1.37E+04 3.60E+04 3.60E+04 3.60E+04
RDPDELAY001 1.27E+03 1.49E+04 8.77E+04 1.74E+05
*
*
ALARM IS INITIATED
* NUMBER OF PLUMES MODELED
* RISK-DOMINANT PLUME
* REPRESENTATIVE TIME POINT FOR DISPERSION
AND RADIOACTIVE DECAY (MIDPOINT)
* HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
* RELEASE HEIGHT OF EACH PLUME (METERS)
* DURATION OF PLUMES
* TIME OF RELEASE FOR EACH PLUME
(SECONDS FROM SCRAM)

* SOURCE TITLE
* TIME AFTER ACCIDENT INITIATION THAT OFF-SITE
ALARM IS INITIATED
* NUMBER OF PLUMES MODELED
* RISK-DOMINANT PLUME
* REPRESENTATIVE TIME POINT FOR DISPERSION
AND RADIOACTIVE DECAY (MIDPOINT)
* HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
* RELEASE HEIGHT OF EACH PLUME (METERS)
* DURATION OF PLUMES
* TIME OF RELEASE FOR EACH PLUME

```



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No.	2009-11222	
ANALYSIS FOR PSEG ESPA			Rev.	2	Date
Safety Related	X	Non-Safety Related	Page	G-20 of G-20	
Client	PSEG Nuclear Development				
Project	PSEG ESPA				
Proj. No	12380-001	Equip. No.			
	Prepared by		Date		
	Reviewed by		Date		
	Approved by		Date		

(SECONDS FROM SCRAM)

	Xe/Kr	I	Cs	Te	Sr	Ru	La	Ce	Ba
RDRELFRC001	1.24E-04	1.68E-06	1.66E-06	1.30E-06	1.55E-07	6.31E-07	3.19E-09	5.31E-09	2.44E-07
RDRELFRC002	6.54E-04	1.46E-09	0.00E+0	6.96E-09	1.79E-08	6.46E-09	2.88E-10	2.76E-10	2.45E-08
RDRELFRC003	6.90E-04	1.86E-09	0.00E+0	5.08E-10	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
RDRELFRC004	6.45E-04	0.00E+0	0.00E+0	8.88E-11	6.46E-11	4.43E-11	4.55E-13	1.23E-12	6.38E-11



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	H-1	of H-28

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

ATTACHMENT H
ATMOS Input File Data (U.S. EPR)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*****
* FILE NAME: H.INP
*
* Sargent & Lundy (10/2009)
*
*****
* Run Identification (RI) Data
*****
* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT
*
RIATNAM1001 'U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS '
*
*****
* GEOMETRY (GE) DATA
*****
* NUMBER OF RADIAL SPATIAL ELEMENTS
*
GENUMRAD001 10
*
* SPATIAL ENDPOINT DISTANCES IN MILES (MATCHES SITE FILE)
*
* END001 1 2 3 4 5
* END002 10 20 30 40 50
*
* SPATIAL ENDPOINT DISTANCES IN KILOMETERS
*
GESPAEND001 1.61 3.22 4.83 6.44 8.05
GESPAEND002 16.1 32.2 48.3 64.4 80.5
*
*****
* NUCLIDE DATA BLOCK
*****
*

```




Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
Safety Related		Date	H-3
Non-Safety Related		Page	H-3 of H-28
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* NUMBER OF PSEUDO-STABLE NUCLIDES DEFINED IN THE MODEL
 * (USED TO TRUNCATE THE DECAY CHAINS) - USER'S GUIDE APPENDIX C

ISNUMSTB001 27

* LIST OF PSEUDO-STABLE NUCLIDES

ISNUMSTB001	I-129	(daughter of Te-129 and Te-129m)
ISNUMSTB002	Xe-131m	(daughter of I-131)
ISNUMSTB003	Xe-133m	(daughter of I-133)
ISNUMSTB004	Xe-135m	(daughter of I-135)
ISNUMSTB005	Cs-135	(daughter of Xe-135 and Xe-135m)
ISNUMSTB006	Sm-147	(daughter of Pm-147)
ISNUMSTB007	U-234	(daughter of Pu-238)
ISNUMSTB008	U-235	(daughter of Pu-239)
ISNUMSTB009	U-236	(daughter of Pu-240)
ISNUMSTB010	U-237	(daughter of Pu-241)
ISNUMSTB011	Np-237	(daughter of Am-241)
ISNUMSTB012	Rb-87	(daughter of Kr-87)
ISNUMSTB013	Ba-137m	(daughter of Cs-137)
ISNUMSTB014	Rb-88	(daughter of Kr-88)
ISNUMSTB015	Y-91m	(daughter of Sr-91)
ISNUMSTB016	Zr-93	(daughter of Y-93)
ISNUMSTB017	Nb-93m	(daughter of Zr-93)
ISNUMSTB018	Nb-95m	(daughter of Zr-95)
ISNUMSTB019	Nb-97	(daughter of Zr-97 and Nb-97m)
ISNUMSTB020	Nb-97m	(daughter of Zr-97)
ISNUMSTB021	Tc-99	(daughter of Mo-99)
ISNUMSTB022	Rh-103m	(daughter of Ru-103)
ISNUMSTB023	Rh-106	(daughter of Ru-106)
ISNUMSTB024	Te-131	(daughter of Te-131m)
ISNUMSTB025	Pr-144	(daughter of Ce-144 and Pr-144m)
ISNUMSTB026	Pr-144m	(daughter of Ce-144)
ISNUMSTB027	Pm-147	(daughter of Nd-147)

*



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	H-4 of H-28
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* NUMBER OF RADIOACTIVE NUCLIDES DEFINED IN THE MODEL

* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

* ISNUMISO001 60

* NUMBER OF CHEMICAL ELEMENT GROUPS DEFINED IN THE MODEL

* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

* ISMAXGRP001 9

* GROUP 1 - NOBLE GASES

* GROUP 2 - IODINE

* GROUP 3 - CESIUM, RUBIDIUM

* GROUP 4 - TELLURIUM GROUP

* GROUP 5 - STRONTIUM

* GROUP 6 - MOLYBDENUM, COBALT, RUTHENIUM, TECHNETIUM

* GROUP 7 - LANTHANUM, YTTRIUM, NEODYMIUM, PROMETHIUM, AMERICIUM, CURIUM

* GROUP 8 - CERIUM, ACTINIDES (PLUTONIUM, NEPTUNIUM)

* GROUP 9 - BARIUM

* WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP

* ALL NUCLIDE GROUPS EXCEPT NOBLE GAS ARE ASSUMED SUBJECT

* TO BOTH WET AND DRY DEPOSITION.

* USER'S GUIDE APPENDIX C

* WETDEP DRYDEP

* ISDEPFLA001 .FALSE. .FALSE.

* ISDEPFLA002 .TRUE. .TRUE.

* ISDEPFLA003 .TRUE. .TRUE.

* ISDEPFLA004 .TRUE. .TRUE.

* ISDEPFLA005 .TRUE. .TRUE.

* ISDEPFLA006 .TRUE. .TRUE.

* ISDEPFLA007 .TRUE. .TRUE.

* ISDEPFLA008 .TRUE. .TRUE.



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page H-5 of H-28

Client PSEG Nuclear Development	<input checked="" type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> Non-Safety Related
Project PSEG ESPA	Prepared by _____ Date _____	
Proj. No 12380-001	Reviewed by _____ Date _____	
Equip. No.	Approved by _____ Date _____	

ISDEPFLA009	.TRUE.	.TRUE.	
*			
*	* CHEMICAL ELEMENT GROUP ASSIGNMENT		
*	* USER'S GUIDE APPENDIX C		
*			
*			
	NUCNAM	IGROUP	
ISOTPGRP001	Co-58	6	
ISOTPGRP002	Co-60	6	
ISOTPGRP003	Kr-85	1	
ISOTPGRP004	Kr-85m	1	
ISOTPGRP005	Kr-87	1	
ISOTPGRP006	Kr-88	1	
ISOTPGRP007	Rb-86	3	
ISOTPGRP008	Sr-89	5	
ISOTPGRP009	Sr-90	5	
ISOTPGRP010	Sr-91	5	
ISOTPGRP011	Sr-92	5	
ISOTPGRP012	Y-90	7	
ISOTPGRP013	Y-91	7	
ISOTPGRP014	Y-92	7	
ISOTPGRP015	Y-93	7	
ISOTPGRP016	Zr-95	7	
ISOTPGRP017	Zr-97	7	
ISOTPGRP018	Nb-95	7	
ISOTPGRP019	Mo-99	6	
ISOTPGRP020	Tc-99m	6	
ISOTPGRP021	Ru-103	6	
ISOTPGRP022	Ru-105	6	
ISOTPGRP023	Ru-106	6	
ISOTPGRP024	Rh-105	6	
ISOTPGRP025	Sb-127	4	
ISOTPGRP026	Sb-129	4	
ISOTPGRP027	Te-127	4	
ISOTPGRP028	Te-127m	4	



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

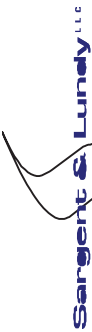
Safety Related X Non-Safety Related

Page H-6 of H-28

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

ISOTGRP029	Te-129	4		
ISOTGRP030	Te-129m	4		
ISOTGRP031	Te-131m	4		
ISOTGRP032	Te-132	4		
ISOTGRP033	I-131	2		
ISOTGRP034	I-132	2		
ISOTGRP035	I-133	2		
ISOTGRP036	I-134	2		
ISOTGRP037	I-135	2		
ISOTGRP038	Xe-133	1		
ISOTGRP039	Xe-135	1		
ISOTGRP040	Cs-134	3		
ISOTGRP041	Cs-136	3		
ISOTGRP042	Cs-137	3		
ISOTGRP043	Ba-139	9		
ISOTGRP044	Ba-140	9		
ISOTGRP045	La-140	7		
ISOTGRP046	La-141	7		
ISOTGRP047	La-142	7		
ISOTGRP048	Ce-141	8		
ISOTGRP049	Ce-143	8		
ISOTGRP050	Ce-144	8		
ISOTGRP051	Pr-143	7		
ISOTGRP052	Nd-147	7		
ISOTGRP053	Np-239	8		
ISOTGRP054	Pu-238	8		
ISOTGRP055	Pu-239	8		
ISOTGRP056	Pu-240	8		
ISOTGRP057	Pu-241	8		
ISOTGRP058	Am-241	7		
ISOTGRP059	Cm-242	7		
ISOTGRP060	Cm-244	7		

 * WET DEPOSITION (WD) DATA



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
Rev. 2 Date
Page H-7 of H-28

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
Prepared by	Date	
Reviewed by	Date	
Approved by	Date	

```

*****
*
* WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR
*
WDCWASH1001 9.5E-5 *NUREG/CR-4551 PART 7, TABLE 2.9
*
* WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR
*
WDCWASH2001 0.8 *NUREG/CR-4551 PART 7, TABLE 2.9
*
*****
* DRY DEPOSITION (DD) DATA
*
*****
* NUMBER OF PARTICLE SIZE GROUPS
*
DDNPSGR001 1 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
*
* DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
*
DDVDEPOS001 0.01 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
*
*****
* DISPERSION PARAMETER (DP) DATA
*****
* # OF DISTANCES IN PLUME-SIZE TABLES--WHICH CAN BE USED AS AN ALTERNATIVE TO
* THE POWER-LAW MODEL: (TO UTILIZE THE POWER-LAW MODEL, SET NUM_DIST TO ZERO
* OR DELETE THE FOLLOWING DATA CARD)
*
NUM_DIST001 0
*
* POWER-LAW FUNCTION IS OF FORM: SIGMA = A * X ** B
*
* TADMOR ND GUR PARAMETRIZATION FOR DISTANCE RANGE 0.5 to 5.0 KM

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	H-8 of H-28

Safety Related		X	Non-Safety Related
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

Prepared by	Date
Reviewed by	Date
Approved by	Date

* (NUREG/CR-4551 PART 7 TABLE 2.4)

* P-G CLASS: A B C D E F

DPCYSIGA001	0.3658	0.2751	0.2089	0.1474	0.1046	0.0722
DPCYSIGB001	0.9031	0.9031	0.9031	0.9031	0.9031	0.9031
DPCZSIGA001	2.5E-4	1.9E-3	0.2	0.3	0.4	0.2
DPCZSIGB001	2.125	1.6021	0.8543	0.6532	0.6021	0.6020

* LINEAR SCALING FACTOR FOR SIGMA-Y FUNCTION, NORMALLY 1

* DPYSCALE001 1.0

* LINEAR SCALING FACTOR FOR SIGMA-Z FUNCTION, NORMALLY USED FOR SURFACE ROUGHNESS LENGTH CORRECTION.

* (Z1 / Z0) ** 0.2, FROM CRAC2 WE HAVE (10 CM / 3 CM) ** 0.2 = 1.27

* SEE NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

* DPZSCALE001 1.27

* REF/BASIS:

* MACCS COMPUTES SIGMA-Y AND SIGMA-Z AS FOLLOWS:

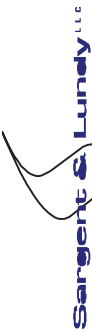
* SIGMA-Y = A * X ** B

* SIGMA-Z = C * X ** D

* THE SIGMA-Y COEFFICIENTS (A AND B) AND SIGMA-Z COEFFICIENTS (C AND D) ARE TAKEN FROM NUREG-4551, VOL. 2, REV. 1, PART 7, SECTION 2.4.

* NO SIGMA-Y SCALING IS REQUIRED/USED.

* SIGMA-Z SCALING VALUE CONSISTENT WITH SAMPLE PROBLEMS IN NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* PLUME MEANDER EXPANSION FACTOR DATA BLOCK

* TIME BASE FOR EXPANSION FACTOR (SECONDS)

* PMTIMBAS001 600.0 * 10 MINUTES

* BREAK POINT FOR FORMULA CHANGE (SECONDS)

* PMBRKPNT001 3600.0 * 1 HOUR

* EXPONENTIAL EXPANSION FACTOR NUMBER 1

* PMXPFFAC1001 0.2

* EXPONENTIAL EXPANSION FACTOR NUMBER 2

* PMXPFFAC2001 0.25

* REF/BASIS:

* ABOVE VALUES CONSISTENT WITH SECTION 2.3.2 FROM NUREG/CR-4551.

* PLUME RISE DATA BLOCK

* THE FOLLOWING SCALING FACTORS COULD BE USED TO MODIFY THE MACCS METHOD OF PERFORMING PLUME RISE CALCS.

* SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A BOUYANT PLUME (USED BY FUNCTION CAUGHT)

* PRSCLCRW001 1.0



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	H-10 of H-28
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* * SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
 * (USED BY FUNCTION PLMRIS)
 * *
 PRSCLADP001 1.0
 * *
 * SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
 * (USED BY FUNCTION PLMRIS)
 * *
 PRSCLEFP001 1.0
 * *
 * REF/BASIS:
 * *
 * THE SCALING FACTORS CAN BE USED TO MODIFY THE RESULTS OF THE HARD-WIRED
 * PLUME RISE CALCULATIONS PERFORMED BY MACCS. THIS FUNCTIONALITY IS NOT UTILIZED
 * IN THIS ANALYSIS (SCALING FACTORS SET TO 1).
 * *
 * WAKE EFFECTS DATA BLOCK
 * *
 * DETERMINATION OF WAKE EFFECTS HAS BEEN REVISED FOR MACCS2. THE WIDTH VARIABLE
 * IS NO LONGER INCLUDED. ADDITIONALLY, VALUES MUST BE INCLUDED FOR EACH PLUME.
 * *
 * VENDOR DATA (ATTACHMENT A.4):
 * BUILDING WIDTH = - m
 * BUILDING HEIGHT = 63.30 m
 * *
 * INITIAL VALUE FOR SIGMA-Y FOR EACH PLUME (4)
 * *
 SIGYINIT001 25.37 *INITIAL SIGMA-Y = W/4.3 = 25.37
 * *
 * INITIAL VALUE FOR SIGMA-Z FOR EACH PLUME (4)
 * *
 SIGZINIT001 28.98 *INITIAL SIGMA-Z = H/2.15 = 29.98



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X	Page	H-11 of H-28
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* * BUILDING HEIGHT (METERS)
 * *
 * WEBUILDH001 63.30
 * *
 * * * * *
 * * RELEASE DATA BLOCK (1/2, SEE END OF FILE SECOND PORTION)
 * * * * *

* * PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP
 * * UNIFORM SIZE DISTRIBUTION IS ASSUMED FOR ALL 9 CHEMICAL GROUPS
 * *

- RDPDIST001 1.0
- RDPDIST002 1.0
- RDPDIST003 1.0
- RDPDIST004 1.0
- RDPDIST005 1.0
- RDPDIST006 1.0
- RDPDIST007 1.0
- RDPDIST008 1.0
- RDPDIST009 1.0

* U.S. EPR CORE INVENTORY BASED ON VENDOR DATA (ATTACHMENT A.4)
 * * NUCNAM CORINV (Bq)

* * THE INVENTORY AS GIVEN BELOW IS IN UNITS OF Ci, IT NEEDS TO BE IN UNITS OF Bq
 * * VARIABLE RDCORSCA001 IS SET TO 3.7E+10 FOR THE NECESSARY UNIT CONVERSION (Ci to Bq)
 * * SEE USER'S GUIDE PG. 5-28
 * *

- RDCORINV001 Co-58 0.00E+00
- RDCORINV002 Co-60 0.00E+00
- RDCORINV003 Kr-85 2.10E+06
- RDCORINV004 Kr-85m 4.50E+07
- RDCORINV005 Kr-87 9.02E+07
- RDCORINV006 Kr-88 1.29E+08
- RDCORINV007 Rb-86 5.80E+05



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

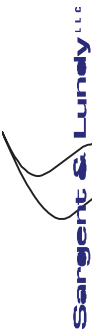
Rev. 2 Date

Safety Related X Non-Safety Related

Page H-12 of H-28

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

RDCORINV008	Sr-89	1.61E+08		
RDCORINV009	Sr-90	1.69E+07		
RDCORINV010	Sr-91	2.07E+08		
RDCORINV011	Sr-92	2.14E+08		
RDCORINV012	Y-90	1.79E+07		
RDCORINV013	Y-91	1.96E+08		
RDCORINV014	Y-92	2.14E+08		
RDCORINV015	Y-93	2.34E+08		
RDCORINV016	Zr-95	2.29E+08		
RDCORINV017	Zr-97	2.43E+08		
RDCORINV018	Nb-95	2.29E+08		
RDCORINV019	Mo-99	2.59E+08		
RDCORINV020	Tc-99m	2.27E+08		
RDCORINV021	Ru-103	2.42E+08		
RDCORINV022	Ru-105	1.96E+08		
RDCORINV023	Ru-106	1.43E+08		
RDCORINV024	Rh-105	1.75E+08		
RDCORINV025	Sb-127	1.80E+07		
RDCORINV026	Sb-129	4.85E+07		
RDCORINV027	Te-127	1.79E+07		
RDCORINV028	Te-127m	2.43E+06		
RDCORINV029	Te-129	4.78E+07		
RDCORINV030	Te-129m	7.08E+06		
RDCORINV031	Te-131m	2.04E+07		
RDCORINV032	Te-132	1.98E+08		
RDCORINV033	I-131	1.39E+08		
RDCORINV034	I-132	2.01E+08		
RDCORINV035	I-133	2.90E+08		
RDCORINV036	I-134	3.18E+08		
RDCORINV037	I-135	2.69E+08		
RDCORINV038	Xe-133	2.89E+08		
RDCORINV039	Xe-135	9.26E+07		
RDCORINV040	Cs-134	6.48E+07		
RDCORINV041	Cs-136	1.61E+07		
RDCORINV042	Cs-137	2.47E+07		



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	H-13 of H-28
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

RDCORINV043 Ba-139 2.62E+08
RDCORINV044 Ba-140 2.52E+08
RDCORINV045 La-140 2.54E+08
RDCORINV046 La-141 2.41E+08
RDCORINV047 La-142 2.35E+08
RDCORINV048 Ce-141 2.24E+08
RDCORINV049 Ce-143 2.28E+08
RDCORINV050 Ce-144 1.70E+08
RDCORINV051 Pr-143 2.26E+08
RDCORINV052 Nd-147 9.44E+07
RDCORINV053 Np-239 3.82E+09
RDCORINV054 Pu-238 1.46E+06
RDCORINV055 Pu-239 6.14E+04
RDCORINV056 Pu-240 1.40E+05
RDCORINV057 Pu-241 2.53E+07
RDCORINV058 Am-241 2.88E+04
RDCORINV059 Cm-242 1.31E+07
RDCORINV060 Cm-244 6.94E+06
*
* SCALING FACTOR TO ADJUST THE CORE INVENTORY
*
RDCORSCA001 3.7E+10 *SCALING FACTOR FOR CORE INVENTORY (Ci to Bq)
*
* DAUGHTER INGROWTH PRODUCTS RELEASED IN THE SAME PROPORTION AS THE PARENT
*
RDAPLFR001 PARENT
*
*****
* OUTPUT CONTROL DATA BLOCK
*****
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
*
OCENDAT1001 .FALSE. *SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC
*
OCIDEBUG001 0 * SKIPS DEBUG PRINTING

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page H-14 of H-28

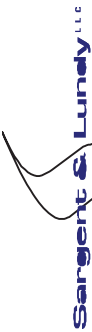
Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

```

*
* TYPE0NUMBER      0  *VALUE = 0 = NO ATMOSPHERIC (TYPE 0) RESULTS PRINTED
*
*
*
* METEOROLOGICAL SAMPLING DATA BLOCK
*
* METEOROLOGICAL SAMPLING OPTION CODE:
*
* METCOD = 1, USER SPECIFIED DAY AND HOUR IN THE YEAR (FROM MET FILE) ,
* 2, WEATHER CATEGORY BIN SAMPLING,
* 3, 120 HOURS OF WEATHER SPECIFIED ON THE ATMOS USER INPUT FILE,
* 4, CONSTANT MET (BOUNDARY WEATHER USED FROM THE START),
* 5, STRATIFIED RANDOM SAMPLES FOR EACH DAY OF THE YEAR.
*
* METEOROLOGICAL SAMPLING (M1) DATA
*
M1METCOD001  2  * MET FILE PROVIDED IN ATTACHMENT C
*
* LAST SPATIAL INTERVAL FOR MEASURED WEATHER
*
*
* BOUNDARY WEATHER (M2) DATA
*
M2LIMSPA001  10  * INTERVAL 10 = 50 MILES
*
* BOUNDARY WEATHER MIXING LAYER HEIGHT
*
M2BNDMXH001  1000.0  * METERS, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER STABILITY CLASS INDEX
*
M2IBDSTB001  4  * D-STABILITY, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER RAIN RATE

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page H-15	of H-28

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

* M2BNDRAN001 5.0 * MM/HR, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER WIND SPEED
*
M2BNDWIND001 5.0 * M/S, USER'S GUIDE APPENDIX C
*
*****
* METEOROLOGICAL BIN SAMPLING (M4) DATA
*****
*
* NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
M4NRNINT001 5 * USER'S GUIDE APPENDIX C/NUREG 4551 APPENDIX A
*
* ENDPOINTS OF THE RAIN DISTANCE INTERVALS (KILOMETERS)
*
* NOTE: THESE MUST BE CHOSEN TO MATCH THE SPATIAL ENDPOINT DISTANCES
* SPECIFIED FOR ARRAY SPAEND (10 % ERROR IS ALLOWED)
*
*      2.0  5.0  10.0  30.0  50.0  MILES
M4RNDSTS001 3.22  8.05  16.1  48.3  80.5 *KM
*
* NUMBER OF RAIN INTENSITY BREAKPOINTS
M4NRINTN001 3 * USER'S GUIDE APPENDIX C
*
* RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
*
M4RRRATE001 2.0  4.0  6.0 * USER'S GUIDE APPENDIX C
*
* NUMBER OF WEATHER SAMPLES PER BIN
* USER'S GUIDE APPENDIX C USED 4. MORE SAMPLES ARE PREFERRED, BUT THIS INCREASES
* COMPUTING TIME. USED 12 IN THIS ANALYSIS - MORE ACCURATE WITH REASONABLE RUN TIME
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X Non-Safety Related	Page	H-16 of H-28
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

M4NSMPLS001 12 *4 MINIMUM, 24 MAXIMUM
 *
 * INITIAL SEED FOR RANDOM NUMBER GENERATOR FOR WEATHER SAMPLING
 *
 M4IRSEED001 79

 * RELEASE DATA BLOCK (2/2)

 *

 * SOURCE TERM NUMBER 1 OF 23

 *
 RDATNAM2001 'RC101' * SOURCE TITLE
 RDOALARM001 8.68E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 RDPLHEAT001 1.81E+04 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 RDPLHITE001 60.5 * RELEASE HEIGHT OF EACH PLUME (METERS)
 RDPLUDUR001 3.60E+4 * DURATION OF PLUMES
 RDPDELAY001 1.44E+4 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
 *
 * Xe/Kr I Cs Te Sr Ru La Ce Ba
 RDRELFRC001 1.90E-03 2.40E-05 2.00E-05 5.30E-05 8.50E-06 4.40E-06 2.80E-07 7.30E-07 2.40E-05
 *

 * SOURCE TERM NUMBER 2 OF 23

 *
 RDATNAM2001 'RC201' * SOURCE TITLE
 RDOALARM001 8.46E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 RDMAXRIS001 1 * RISK-DOMINANT PLUME



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page H-17 of H-28

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

```

RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 5.68E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 0.839 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 1.08E+03 * DURATION OF PLUMES
RDPDELAY001 1.22E+4 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
RDRELFRC001 3.60E-01 1.00E-01 9.50E-02 7.60E-03 7.80E-05 1.10E-03 3.40E-06 1.70E-05 4.10E-04
*
*****
* SOURCE TERM NUMBER 3 OF 23
*****
*
RDATNAM2001 'RC202' * SOURCE TITLE
RDOALARM001 8.46E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 2.25E+8 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 0.839 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.10E+04 * DURATION OF PLUMES
RDPDELAY001 1.22E+4 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
RDRELFRC001 7.90E-01 2.30E-02 1.50E-02 2.00E-02 2.40E-04 3.40E-03 1.90E-05 6.80E-05 2.40E-03
*
*****
* SOURCE TERM NUMBER 4 OF 23
*****
*
RDATNAM2001 'RC203' * SOURCE TITLE
RDOALARM001 8.46E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page H-18 of H-28

Safety Related	X Non-Safety Related
Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

Prepared by	Date
Reviewed by	Date
Approved by	Date

```

RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 2.50E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 0.839 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 3.10E+04 * DURATION OF PLUMES
RDPDELAY001 1.22E+4 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
RDRELLFR001 8.90E-01 5.30E-02 2.80E-02 1.60E-01 1.40E-04 6.80E-03 1.50E-05 2.40E-04 2.20E-03
*
* SOURCE TERM NUMBER 5 OF 23
*
RDATNAM2001 'RC204' * SOURCE TITLE
RDOALARM001 8.46E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 2.60E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 0.839 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 2.92E+04 * DURATION OF PLUMES
RDPDELAY001 1.22E+4 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
RDRELLFR001 9.50E-01 2.80E-02 1.60E-02 3.60E-02 1.70E-04 5.30E-03 1.40E-05 6.20E-05 3.20E-03
*
* SOURCE TERM NUMBER 6 OF 23
*
RDATNAM2001 'RC205' * SOURCE TITLE
RDOALARM001 8.46E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED

```




**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page H-19 of H-28

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 3.08E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 0.839 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 2.92E+04 * DURATION OF PLUMES
RDPDELAY001 1.22E+4 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
RDRELFRC001 9.80E-01 5.70E-02 3.60E-02 9.30E-02 4.00E-03 9.80E-03 3.00E-04 5.30E-04 6.10E-03
*
* SOURCE TERM NUMBER 7 OF 23
*****
*
RDATNAM2001 'RC206' * SOURCE TITLE
RDOALARM001 8.53E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001 1 * NUMBER OF PLUMES MODELED
RDMAXRIS001 1 * RISK-DOMINANT PLUME
RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001 2.04E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001 0.827 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001 2.48E+04 * DURATION OF PLUMES
RDPDELAY001 1.30E+04 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
RDRELFRC001 1.90E-01 5.60E-03 5.00E-03 9.00E-03 1.20E-03 7.30E-03 5.50E-05 1.80E-04 4.20E-03
*
* SOURCE TERM NUMBER 8 OF 23
*****
*
RDATNAM2001 'RC301' * SOURCE TITLE

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page	H-20	of H-28

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

RDOALARM001	8.46E+03	*	TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED						
RDNUMREL001	1	*	NUMBER OF PLUMES MODELED						
RDMAXRIS001	1	*	RISK-DOMINANT PLUME						
RDREFTIM001	0.5	*	REPRESENTATIVE TIME POINT FOR DISPERSION						
RDPLHEAT001	2.25E+8	*	HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)						
RDPLHITE001	0.839	*	RELEASE HEIGHT OF EACH PLUME (METERS)						
RDPLUDUR001	3.10E+04	*	DURATION OF PLUMES						
RDPELAY001	1.22E+4	*	TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)						
*									
Xe/Kr	I	Cs	Te	Sr	Ru	La	Ce		
RDRELFRC001	7.90E-01	2.30E-02	1.50E-02	2.00E-02	2.40E-04	3.40E-03	1.90E-05	6.80E-05	2.40E-03
*									
*									
***** SOURCE TERM NUMBER 9 OF 23 *****									
***** SOURCE TERM NUMBER 9 OF 23 *****									
*									
RDATNAM2001	'RC302'	*	SOURCE TITLE						
RDOALARM001	8.46E+03	*	TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED						
RDNUMREL001	1	*	NUMBER OF PLUMES MODELED						
RDMAXRIS001	1	*	RISK-DOMINANT PLUME						
RDREFTIM001	0.5	*	REPRESENTATIVE TIME POINT FOR DISPERSION						
RDPLHEAT001	2.50E+08	*	HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)						
RDPLHITE001	0.839	*	RELEASE HEIGHT OF EACH PLUME (METERS)						
RDPLUDUR001	3.10E+04	*	DURATION OF PLUMES						
RDPELAY001	1.22E+4	*	TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)						
*									
Xe/Kr	I	Cs	Te	Sr	Ru	La	Ce	Ba	
RDRELFRC001	8.90E-01	5.30E-02	2.80E-02	1.60E-01	1.40E-04	6.80E-03	1.50E-05	2.40E-04	2.20E-03

***** SOURCE TERM NUMBER 10 OF 23 *****

***** SOURCE TERM NUMBER 10 OF 23 *****

***** SOURCE TERM NUMBER 10 OF 23 *****

***** SOURCE TERM NUMBER 10 OF 23 *****

***** SOURCE TERM NUMBER 10 OF 23 *****



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page H-21	of H-28

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

RDATNAM2001	'RC303'	* SOURCE TITLE								
RDOALARM001	8.46E+03	* TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED								
RDNUMREL001	1	* NUMBER OF PLUMES MODELED								
RDMAXRIS001	1	* RISK-DOMINANT PLUME								
RDREFTIM001	0.5	* REPRESENTATIVE TIME POINT FOR DISPERSION								
RDPLHEAT001	2.60E+08	* HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)								
RDPLHITE001	0.839	* RELEASE HEIGHT OF EACH PLUME (METERS)								
RDPLUDUR001	2.92E+04	* DURATION OF PLUMES								
RDPELAY001	1.22E+4	* TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)								

* Xe/Kr	I	Cs	Te	Sr	Ru	La	Ce	Ba
RDRELFRC001	9.50E-01	2.80E-02	3.60E-02	1.70E-04	5.30E-03	1.40E-05	6.20E-05	3.20E-03

* SOURCE TERM NUMBER 11 OF 23

RDATNAM2001	'RC304'	* SOURCE TITLE						
RDOALARM001	8.46E+03	* TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED						
RDNUMREL001	1	* NUMBER OF PLUMES MODELED						
RDMAXRIS001	1	* RISK-DOMINANT PLUME						
RDREFTIM001	0.5	* REPRESENTATIVE TIME POINT FOR DISPERSION						
RDPLHEAT001	3.08E+08	* HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)						
RDPLHITE001	0.839	* RELEASE HEIGHT OF EACH PLUME (METERS)						
RDPLUDUR001	2.92E+04	* DURATION OF PLUMES						
RDPELAY001	1.22E+4	* TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)						

* Xe/Kr	I	Cs	Te	Sr	Ru	La	Ce	Ba
RDRELFRC001	9.80E-01	5.70E-02	9.30E-02	4.00E-03	9.80E-03	3.00E-04	5.30E-04	6.10E-03

* SOURCE TERM NUMBER 12 OF 23



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	H-22	of	H-28

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by

```

*
RDATNAM2001      'RC401'      * SOURCE TITLE
RDOALARM001      8.68E+03      * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001      1          * NUMBER OF PLUMES MODELED
RDMAXRIS001      1          * RISK-DOMINANT PLUME
RDREFTIM001      0.5        * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001      3.73E+08     * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001      35.7       * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001      1.76E+04     * DURATION OF PLUMES
RDPDELAY001      3.20E+04     * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
*
*
RDRELFR001      8.00E-01  4.60E-03  2.30E-03  3.40E-03  2.70E-03  1.50E-03  8.00E-05  3.40E-04  5.20E-03
Xe/Kr  I      Cs      Te      Sr      Ru      La      Ce      Ba
*
*****
* SOURCE TERM NUMBER 13 OF 23
*****
*
RDATNAM2001      'RC402'      * SOURCE TITLE
RDOALARM001      8.68E+03      * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001      1          * NUMBER OF PLUMES MODELED
RDMAXRIS001      1          * RISK-DOMINANT PLUME
RDREFTIM001      0.5        * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001      3.73E+08     * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001      35.7       * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001      3.60E+4     * DURATION OF PLUMES
RDPDELAY001      3.20E+04     * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
*
*
RDRELFR001      9.70E-01  2.00E-02  1.00E-02  1.20E-02  3.80E-03  2.10E-03  1.10E-04  4.90E-04  7.30E-03
Xe/Kr  I      Cs      Te      Sr      Ru      La      Ce      Ba
*
*****
* SOURCE TERM NUMBER 14 OF 23
*****

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page	H-23	of H-28

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

*
* RDATNAM2001      'RC403 '      * SOURCE TITLE
* RDOALARM001     8.68E+03      * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
* RDNUNREL001     1              * NUMBER OF PLUMES MODELED
* RDMAXRIS001     1              * RISK-DOMINANT PLUME
* RDREFTIM001     0.5           * REPRESENTATIVE TIME POINT FOR DISPERSION
* RDPLHEAT001     3.73E+08      * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
* RDPLHITE001     35.7          * RELEASE HEIGHT OF EACH PLUME (METERS)
* RDPLUDUR001     1.76E+04      * DURATION OF PLUMES
* RDPDELAY001     3.20E+04      * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
RDRELFR001 8.00E-01 4.60E-03 2.30E-03 3.40E-03 2.70E-03 1.50E-03 8.00E-05 3.40E-04 5.20E-03
*
*
* SOURCE TERM NUMBER 15 OF 23
*****

```

```

*
* RDATNAM2001      'RC404 '      * SOURCE TITLE
* RDOALARM001     8.68E+03      * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
* RDNUNREL001     1              * NUMBER OF PLUMES MODELED
* RDMAXRIS001     1              * RISK-DOMINANT PLUME
* RDREFTIM001     0.5           * REPRESENTATIVE TIME POINT FOR DISPERSION
* RDPLHEAT001     3.73E+08      * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
* RDPLHITE001     35.7          * RELEASE HEIGHT OF EACH PLUME (METERS)
* RDPLUDUR001     3.60E+4       * DURATION OF PLUMES
* RDPDELAY001     3.20E+04      * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
RDRELFR001 9.70E-01 2.00E-02 1.00E-02 1.20E-02 3.80E-03 2.10E-03 1.10E-04 4.90E-04 7.30E-03
*
*
* SOURCE TERM NUMBER 15 OF 23
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X	Page	H-24 of H-28
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* SOURCE TERM NUMBER 16 OF 23
 * * * * *
 * RDATNAM2001 'RC501' * SOURCE TITLE
 RDOALARM001 8.676E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 RDPLHEAT001 5.03E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 RDPLHITE001 35.7 * RELEASE HEIGHT OF EACH PLUME (METERS)
 RDPLUDUR001 3.60E+4 * DURATION OF PLUMES
 RDPDELAY001 2.16E+05 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
 * * * * *
 * Xe/Kr I Cs Te Sr Ru La Ce Ba
 RDRELFR001 9.90E-01 7.70E-04 4.00E-04 1.70E-02 7.40E-06 4.40E-05 2.20E-07 7.00E-07 2.40E-05
 * * * * *
 * SOURCE TERM NUMBER 17 OF 23
 * * * * *
 * RDATNAM2001 'RC502' * SOURCE TITLE
 RDOALARM001 8.68E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 RDPLHEAT001 5.03E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 RDPLHITE001 35.7 * RELEASE HEIGHT OF EACH PLUME (METERS)
 RDPLUDUR001 3.60E+4 * DURATION OF PLUMES
 RDPDELAY001 2.16E+05 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
 * * * * *
 * Xe/Kr I Cs Te Sr Ru La Ce Ba
 RDRELFR001 9.90E-01 7.70E-04 4.00E-04 1.70E-02 7.40E-06 4.40E-05 2.20E-07 7.00E-07 2.40E-05
 * * * * *



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page H-25 of H-28

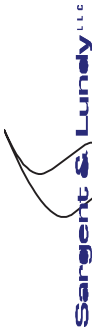
Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

* SOURCE TERM NUMBER 18 OF 23

*
RDATNAM2001 'RC503'
RDOALARM001 8.676E+03 * SOURCE TITLE
RDNUMREL001 1 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDMAXRIS001 1 * NUMBER OF PLUMES MODELED
RDREFTIM001 0.5 * RISK-DOMINANT PLUME
RDPLHEAT001 3.20E+09 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHITE001 35.7 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLUDUR001 3.60E+4 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPDELAY001 3.02E+05 * DURATION OF PLUMES
* TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
*
Xe/Kr I Cs Te Sr Ru La Ce Ba
RDRELFRC001 1.00E+00 4.10E-04 6.90E-05 5.10E-05 8.50E-06 4.40E-07 2.80E-07 7.30E-07 2.40E-05
*

* SOURCE TERM NUMBER 19 OF 23

*
RDATNAM2001 'RC504'
RDOALARM001 8.68E+03 * SOURCE TITLE
RDNUMREL001 1 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDMAXRIS001 1 * NUMBER OF PLUMES MODELED
RDREFTIM001 0.5 * RISK-DOMINANT PLUME
RDPLHEAT001 3.20E+09 * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHITE001 35.7 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLUDUR001 3.60E+4 * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPDELAY001 3.02E+05 * DURATION OF PLUMES
* TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
*
Xe/Kr I Cs Te Sr Ru La Ce Ba
RDRELFRC001 1.00E+00 4.10E-04 6.90E-05 5.10E-05 8.50E-06 4.40E-07 2.80E-07 7.30E-07 2.40E-05
*



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2 Date

Page H-27 of H-28

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
		Approved by		Date	

* * * * *

* SOURCE TERM NUMBER 22 OF 23

* * * * *

```

RDATNAM2001      'RC702'      * SOURCE TITLE
RDOALARM001      4.21E+03      * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001      1              * NUMBER OF PLUMES MODELED
RDMAXRIS001      1              * RISK-DOMINANT PLUME
RDREFTIM001      0.5           * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001      1.36E+07      * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001      24.75         * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001      2.41E+04      * DURATION OF PLUMES
RDPDELAY001      1.19E+04      * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
  
```

	Xe/Kr	I	Cs	Te	Sr	Ru	La	Ce	Ba
RDRLEFRC001	1.10E-01	8.40E-02	8.70E-02	1.40E-01	1.20E-02	9.60E-02	4.50E-04	2.20E-03	5.40E-02

* * * * *

* SOURCE TERM NUMBER 23 OF 23

* * * * *

```

RDATNAM2001      'RC802'      * SOURCE TITLE
RDOALARM001      2.42E+04      * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
RDNUMREL001      1              * NUMBER OF PLUMES MODELED
RDMAXRIS001      1              * RISK-DOMINANT PLUME
RDREFTIM001      0.5           * REPRESENTATIVE TIME POINT FOR DISPERSION
RDPLHEAT001      2.36E+08      * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
RDPLHITE001      30.6          * RELEASE HEIGHT OF EACH PLUME (METERS)
RDPLUDUR001      2.02E+04      * DURATION OF PLUMES
RDPDELAY001      2.84E+04      * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
  
```

	Xe/Kr	I	Cs	Te	Sr	Ru	La	Ce	Ba
--	-------	---	----	----	----	----	----	----	----

* * * * *



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	H-28 of H-28
Non-Safety Related			
Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

RDREILFRC001 9.80E-01 7.10E-01 6.90E-01 6.40E-01 1.30E-01 5.70E-01 3.90E-03 2.20E-02 3.80E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	1.1-1	of 1.1-373

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT I.1
MACCS2 Output File Data (ABWR, 4005 MWt)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 P1: ATMOS USER INPUT (UNIT 24) = E.1.INP
 P2: EARLY USER INPUT (UNIT 25) = E.2.INP
 P3: CHRONC USER INPUT (UNIT 26) = E.3.INP
 P4: METEOROLOGY DATA (UNIT 28) = C.INP
 P5: SITE DATA INPUT (UNIT 29) = D.INP
 P6: LIST OUTPUT (UNIT 06) = I.1.OUT

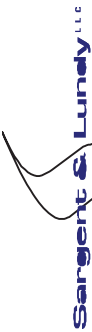
USER INPUT IS READ FROM UNIT 24
 RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.
 THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
 THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

RECORD NUMBER RECORD

```

*****
* FILE NAME: E.1.INP
*
* Sargent & Lundy (10/2009)
*
* Run Identification (RI) Data
*****
* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT
*
1 RIATNAM1001 'ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS'
*
* GEOMETRY (GE) DATA
*****
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-3 of 1.1-373

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.
Prepared by		Date
Reviewed by		Date
Approved by		Date

```

* NUMBER OF RADIAL SPATIAL ELEMENTS
*
2 GENUMRAD001 10
*
* SPATIAL ENDPOINT DISTANCES IN MILES (MATCHES SITE FILE)
*
*      END001 1 2 3 4 5
*      END002 10 20 30 40 50
*
* SPATIAL ENDPOINT DISTANCES IN KILOMETERS
*
3 GESPAEND001 1.61 3.22 4.83 6.44 8.05
4 GESPAEND002 16.1 32.2 48.3 64.4 80.5
*
*****
* NUCLIDE DATA
*****
*
* NUMBER OF PSEUDO-STABLE NUCLIDES DEFINED IN THE MODEL
* (USED TO TRUNCATE THE DECAY CHAINS) - USER'S GUIDE PG.C-1
*
5 ISNUMSTB001 27
*
* LIST OF PSEUDO-STABLE NUCLIDES
*
6 ISNAMSTB001 I-129 (daughter of Te-129 and Te-129m)
7 ISNAMSTB002 Xe-131m (daughter of I-131)
8 ISNAMSTB003 Xe-133m (daughter of I-133)
9 ISNAMSTB004 Xe-135m (daughter of I-135)
10 ISNAMSTB005 Cs-135 (daughter of Xe-135 and Xe-135m)
11 ISNAMSTB006 Sm-147 (daughter of Pm-147)
12 ISNAMSTB007 U-234 (daughter of Pu-238)
13 ISNAMSTB008 U-235 (daughter of Pu-239)
14 ISNAMSTB009 U-236 (daughter of Pu-240)
15 ISNAMSTB010 U-237 (daughter of Pu-241)

```



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.1-4 of 1.1-373

Client	PSEG Nuclear Development		Safety Related	Non-Safety Related	Prepared by	Date
Project	PSEG ESPA		<input checked="" type="checkbox"/>	<input type="checkbox"/>	Reviewed by	Date
Proj. No	12380-001	Equip. No.			Approved by	Date

16	ISNAMSTB011	Np-237	(daughter of Am-241)			
17	ISNAMSTB012	Rb-87	(daughter of Kr-87)			
18	ISNAMSTB013	Ba-137m	(daughter of Cs-137)			
19	ISNAMSTB014	Rb-88	(daughter of Kr-88)			
20	ISNAMSTB015	Y-91m	(daughter of Sr-91)			
21	ISNAMSTB016	Zr-93	(daughter of Y-93)			
22	ISNAMSTB017	Nb-93m	(daughter of Zr-93)			
23	ISNAMSTB018	Nb-95m	(daughter of Zr-95)			
24	ISNAMSTB019	Nb-97	(daughter of Zr-97 and Nb-97m)			
25	ISNAMSTB020	Nb-97m	(daughter of Zr-97)			
26	ISNAMSTB021	Tc-99	(daughter of Mo-99)			
27	ISNAMSTB022	Rh-103m	(daughter of Ru-103)			
28	ISNAMSTB023	Rh-106	(daughter of Ru-106)			
29	ISNAMSTB024	Te-131	(daughter of Te-131m)			
30	ISNAMSTB025	Pr-144	(daughter of Ce-144 and Pr-144m)			
31	ISNAMSTB026	Pr-144m	(daughter of Ce-144)			
32	ISNAMSTB027	Pm-147	(daughter of Nd-147)			

* NUMBER OF RADIOACTIVE NUCLIDES DEFINED IN THE MODEL

* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

*

33 ISNUMISO001 60

*

* NUMBER OF CHEMICAL ELEMENT GROUPS DEFINED IN THE MODEL

* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

*

34 ISMAXGRP001 7

*

* GROUP 1 - NOBLE GASES

* GROUP 2 - IODINE

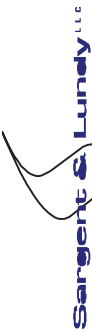
* GROUP 3 - CESIUM, RUBIDIUM

* GROUP 4 - TELLURIUM GROUP

* GROUP 5/9 - STRONTIUM

* GROUP 6 - MOLYBDENUM, COBALT, RUTHENIUM, TECHNETIUM

* GROUP 7/8 - LANTHANUM, YTTRIUM, NEODYMIUM, PROMETHIUM, AMERICIUM, CURIUM



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-5 of 1.1-373

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

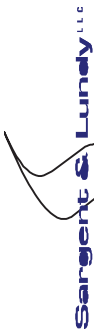
Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

* GROUP 8/8 - CERIUM, ACTINIDES (PLUTONIUM, NEPTUNIUM)
 * GROUP 9/5 - BARIUM
 *
 * WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP
 * ALL NUCLIDE GROUPS EXCEPT NOBLE GAS ARE ASSUMED SUBJECT
 * TO BOTH WET AND DRY DEPOSITION.
 * USER'S GUIDE APPENDIX C

	WETDEP	DRYDEP
35	ISDEPFLA001	.FALSE.
36	ISDEPFLA002	.TRUE.
37	ISDEPFLA003	.TRUE.
38	ISDEPFLA004	.TRUE.
39	ISDEPFLA005	.TRUE.
40	ISDEPFLA006	.TRUE.
41	ISDEPFLA007	.TRUE.
	* ISDEPFLA008	.TRUE.
	* ISDEPFLA009	.TRUE.

* CHEMICAL ELEMENT GROUP ASSIGNMENT
 * USER'S GUIDE APPENDIX C

	NUCNAM	IGROUP
42	ISOTFGRP001	Co-58
43	ISOTFGRP002	Co-60
44	ISOTFGRP003	Kr-85
45	ISOTFGRP004	Kr-85m
46	ISOTFGRP005	Kr-87
47	ISOTFGRP006	Kr-88
48	ISOTFGRP007	Rb-86
49	ISOTFGRP008	Sr-89
50	ISOTFGRP009	Sr-90
51	ISOTFGRP010	Sr-91



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-6 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

52	ISOTPGRP011	Sr-92	5	
53	ISOTPGRP012	Y-90	7	
54	ISOTPGRP013	Y-91	7	
55	ISOTPGRP014	Y-92	7	
56	ISOTPGRP015	Y-93	7	
57	ISOTPGRP016	Zr-95	7	
58	ISOTPGRP017	Zr-97	7	
59	ISOTPGRP018	Nb-95	7	
60	ISOTPGRP019	Mo-99	6	
61	ISOTPGRP020	Tc-99m	6	
62	ISOTPGRP021	Ru-103	6	
63	ISOTPGRP022	Ru-105	6	
64	ISOTPGRP023	Ru-106	6	
65	ISOTPGRP024	Rh-105	6	
66	ISOTPGRP025	Sb-127	4	
67	ISOTPGRP026	Sb-129	4	
68	ISOTPGRP027	Te-127	4	
69	ISOTPGRP028	Te-127m	4	
70	ISOTPGRP029	Te-129	4	
71	ISOTPGRP030	Te-129m	4	
72	ISOTPGRP031	Te-131m	4	
73	ISOTPGRP032	Te-132	4	
74	ISOTPGRP033	I-131	2	
75	ISOTPGRP034	I-132	2	
76	ISOTPGRP035	I-133	2	
77	ISOTPGRP036	I-134	2	
78	ISOTPGRP037	I-135	2	
79	ISOTPGRP038	Xe-133	1	
80	ISOTPGRP039	Xe-135	1	
81	ISOTPGRP040	Cs-134	3	
82	ISOTPGRP041	Cs-136	3	
83	ISOTPGRP042	Cs-137	3	
84	ISOTPGRP043	Ba-139	5	*9
85	ISOTPGRP044	Ba-140	5	*9
86	ISOTPGRP045	La-140	7	



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-7 of 1.1-373

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

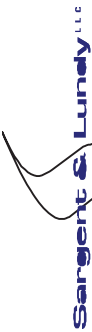
87	ISOTPGRP046	Ia-141	7		
88	ISOTPGRP047	Ia-142	7		
89	ISOTPGRP048	Ce-141	7 *8		
90	ISOTPGRP049	Ce-143	7 *8		
91	ISOTPGRP050	Ce-144	7 *8		
92	ISOTPGRP051	Pr-143	7		
93	ISOTPGRP052	Nd-147	7		
94	ISOTPGRP053	Np-239	7 * 8		
95	ISOTPGRP054	Pu-238	7 * 8		
96	ISOTPGRP055	Pu-239	7 * 8		
97	ISOTPGRP056	Pu-240	7 * 8		
98	ISOTPGRP057	Pu-241	7 * 8		
99	ISOTPGRP058	Am-241	7		
100	ISOTPGRP059	Cm-242	7		
101	ISOTPGRP060	Cm-244	7		

 * WET DEPOSITION (WD) DATA

 *
 * WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR
 *
 102 WDCWASH1001 9.5E-5 *NUREG/CR-4551 PART 7, TABLE 2.9
 *
 * WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR
 *
 103 WDCWASH2001 0.8 *NUREG/CR-4551 PART 7, TABLE 2.9
 *

 * DRY DEPOSITION (DD) DATA

 *
 * NUMBER OF PARTICLE SIZE GROUPS
 *
 104 DDNPSGRP001 1 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.1-8 of 1.1-373	
Non-Safety Related		Prepared by	Date
Client PSEG Nuclear Development		Reviewed by	Date
Project PSEG ESPA		Approved by	Date
Proj. No 12380-001	Equip. No.		

```

*
* DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
*
105 DDVDEPOS001 0.01 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
*
*****
* DISPERSION PARAMETER (DP) DATA
*****
*
* # OF DISTANCES IN PLUME-SIZE TABLES--WHICH CAN BE USED AS AN ALTERNATIVE TO
* THE POWER-LAW MODEL: (TO UTILIZE THE POWER-LAW MODEL, SET NUM_DIST TO ZERO
* OR DELETE THE FOLLOWING DATA CARD)
*
106 NUM_DIST001 0
*
* POWER-LAW FUNCTION IS OF FORM: SIGMA = A * X ** B
*
* TADMOR ND GUR PARAMETRIZATION FOR DISTANCE RANGE 0.5 to 5.0 KM
* (NUREG/CR-4551 PART 7 TABLE 2.4)
*
* P-G CLASS: A B C D E F
107 DPCYSIGA001 0.3658 0.2751 0.2089 0.1474 0.1046 0.0722
108 DPCYSIGB001 0.9031 0.9031 0.9031 0.9031 0.9031 0.9031
109 DPCZSIGA001 2.5E-4 1.9E-3 0.2 0.3 0.4 0.2
110 DPCZSIGB001 2.125 1.6021 0.8543 0.6532 0.6021 0.6020
*
* LINEAR SCALING FACTOR FOR SIGMA-Y FUNCTION, NORMALLY 1
*
111 DPYSCALE001 1.0
*
* LINEAR SCALING FACTOR FOR SIGMA-Z FUNCTION,
* NORMALLY USED FOR SURFACE ROUGHNESS LENGTH CORRECTION.
* (Z1 / Z0) ** 0.2, FROM CRAC2 WE HAVE (10 CM / 3 CM) ** 0.2 = 1.27
* SEE NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
112 DPZSCALE001 1.27

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* * REF/BASIS:

* * MACCS COMPUTES SIGMA-Y AND SIGMA-Z AS FOLLOWS:

* * SIGMA-Y = A * X ** B

* * SIGMA-Z = C * X ** D

* * THE SIGMA-Y COEFFICIENTS (A AND B) AND SIGMA-Z COEFFICIENTS (C AND D) ARE TAKEN FROM NUREG-4551, VOL. 2, REV. 1, PART 7, SECTION 2.4.

* * NO SIGMA-Y SCALING IS REQUIRED/USED.

* * SIGMA-Z SCALING VALUE CONSISTENT WITH SAMPLE PROBLEMS IN NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

* * PLUME MEANDER EXPANSION FACTOR DATA

* * TIME BASE FOR EXPANSION FACTOR (SECONDS)

113 PMTIMBAS001 600.0 * 10 MINUTES

* * BREAK POINT FOR FORMULA CHANGE (SECONDS)

114 PMBRKPNT001 3600.0 * 1 HOUR

* * EXPONENTIAL EXPANSION FACTOR NUMBER 1

115 PMXPFFAC1001 0.2

* * EXPONENTIAL EXPANSION FACTOR NUMBER 2



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.1-10 of 1.1-373
Non-Safety Related		Prepared by	Date
Client	PSEG Nuclear Development	Reviewed by	Date
Project	PSEG ESPA	Approved by	Date
Proj. No	12380-001	Equip. No.	

116 PMXPFAC2001 0.25

* REF/BASIS:

* ABOVE VALUES CONSISTENT WITH SECTION 2.3.2 FROM NUREG/CR-4551.

* PLUME RISE DATA

* THE FOLLOWING SCALING FACTORS COULD BE USED TO MODIFY THE MACCS METHOD OF PERFORMING PLUME RISE CALCS.

* SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A BOUYANT PLUME (USED BY FUNCTION CAUGHT)

117 PRSCLCRW001 1.0

* SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA (USED BY FUNCTION PLMRIS)

118 PRSCLADP001 1.0

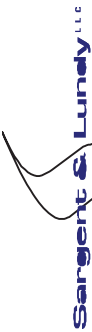
* SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA (USED BY FUNCTION PLMRIS)

119 PRSCLEFP001 1.0

* REF/BASIS:

* THE SCALING FACTORS CAN BE USED TO MODIFY THE RESULTS OF THE HARD-WIRED PLUME RISE CALCULATIONS PERFORMED BY MACCS. THIS FUNCTIONALITY IS NOT UTILIZED IN THIS ANALYSIS (SCALING FACTORS SET TO 1).

*



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	Non-Safety Related
X	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-11	of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

* WAKE EFFECTS DATA

* DETERMINATION OF WAKE EFFECTS HAS BEEN REVISED FOR MACCS2. THE WIDTH VARIABLE
* IS NO LONGER INCLUDED. ADDITIONALLY, VALUES MUST BE INCLUDED FOR EACH PLUME.
*

* VENDOR DATA (ATTACHMENT A.1):
* BUILDING WIDTH = 54.0 m
* BUILDING HEIGHT = 37.7 m
*

* INITIAL VALUE FOR SIGMA-Y FOR EACH PLUME (4)
*

120 SIGYINIT001 12.6 *INITIAL SIGMA-Y = W/4.3 = 54.0/4.3 = 12.6

* INITIAL VALUE FOR SIGMA-Z FOR EACH PLUME

121 SIGZINIT001 17.5 *INITIAL SIGMA-Z = H/2.15 = 37.7/2.15 = 17.5

* BUILDING HEIGHT (METERS)

122 WEBUILDH001 37.7

*

* RELEASE DATA (1/2, SEE END OF FILE SECOND PORTION)

* PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP

* UNIFORM SIZE DISTRIBUTION IS ASSUMED FOR ALL 7 CHEMICAL GROUPS
*

123	RDPSDIST001	1.0
124	RDPSDIST002	1.0
125	RDPSDIST003	1.0
126	RDPSDIST004	1.0
127	RDPSDIST005	1.0

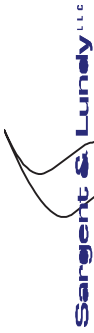


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-12 of 1.1-373

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

128	RDPDIST006	1.0		
129	RDPDIST007	1.0		
	* RDPDIST008	1.0		
	* RDPDIST009	1.0		
	*			
	* ABWR CORE INVENTORY BASED ON VENDOR DATA (ATTACHMENT A.1)			
	* NUCNAM			
	* THE INVENTORY AS GIVEN BELOW IS IN UNITS OF Bq/MWt, IT NEEDS TO BE IN UNITS OF Bq			
	* VARIABLE RDCORSCA001 IS SET TO 4005 (102% of Power Level) FOR THE NECESSARY UNIT CONVERSION			
	* SEE USER'S GUIDE PG. 5-28			
	*			
130	RDCORINV001	Co-58	3.515E+12	
131	RDCORINV002	Co-60	2.118E+10	
132	RDCORINV003	Kr-85	1.116E+13	
133	RDCORINV004	Kr-85m	2.492E+14	
134	RDCORINV005	Kr-87	4.779E+14	
135	RDCORINV006	Kr-88	6.771E+14	
136	RDCORINV007	Rb-86	1.737E+12	
137	RDCORINV008	Sr-89	9.142E+14	
138	RDCORINV009	Sr-90	9.555E+13	
139	RDCORINV010	Sr-91	1.170E+15	
140	RDCORINV011	Sr-92	1.247E+15	
141	RDCORINV012	Y-90	1.031E+14	
142	RDCORINV013	Y-91	1.191E+15	
143	RDCORINV014	Y-92	1.253E+15	
144	RDCORINV015	Y-93	1.448E+15	
145	RDCORINV016	Zr-95	1.635E+15	
146	RDCORINV017	Zr-97	1.679E+15	
147	RDCORINV018	Nb-95	1.634E+15	
148	RDCORINV019	Mo-99	1.853E+15	
149	RDCORINV020	Tc-99m	1.599E+15	
150	RDCORINV021	Ru-103	1.569E+15	
151	RDCORINV022	Ru-105	1.106E+15	
152	RDCORINV023	Ru-106	5.569E+14	
153	RDCORINV024	Rh-105	9.337E+14	

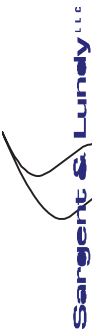


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-13 of 1.1-373

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

154	RDCORINV025	Sb-127	8.452E+13
155	RDCORINV026	Sb-129	2.989E+14
156	RDCORINV027	Te-127	8.343E+13
157	RDCORINV028	Te-127m	1.262E+13
158	RDCORINV029	Te-129	2.812E+14
159	RDCORINV030	Te-129m	7.625E+13
160	RDCORINV031	Te-131m	1.379E+14
161	RDCORINV032	Te-132	1.403E+15
162	RDCORINV033	I-131	9.733E+14
163	RDCORINV034	I-132	1.423E+15
164	RDCORINV035	I-133	2.036E+15
165	RDCORINV036	I-134	2.241E+15
166	RDCORINV037	I-135	1.922E+15
167	RDCORINV038	Xe-133	2.045E+15
168	RDCORINV039	Xe-135	2.645E+14
169	RDCORINV040	Cs-134	1.982E+14
170	RDCORINV041	Cs-136	4.364E+13
171	RDCORINV042	Cs-137	1.230E+14
172	RDCORINV043	Ba-139	1.825E+15
173	RDCORINV044	Ba-140	1.756E+15
174	RDCORINV045	La-140	1.860E+15
175	RDCORINV046	La-141	1.641E+15
176	RDCORINV047	La-142	1.606E+15
177	RDCORINV048	Ce-141	1.628E+15
178	RDCORINV049	Ce-143	1.536E+15
179	RDCORINV050	Ce-144	1.307E+15
180	RDCORINV051	Pr-143	1.519E+15
181	RDCORINV052	Nd-147	6.694E+14
182	RDCORINV053	Np-239	2.263E+16
183	RDCORINV054	Pu-238	5.866E+12
184	RDCORINV055	Pu-239	5.055E+11
185	RDCORINV056	Pu-240	8.318E+11
186	RDCORINV057	Pu-241	1.999E+14
187	RDCORINV058	Am-241	1.627E+11
188	RDCORINV059	Cm-242	1.187E+14



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

189 RDCORINV060 Cm-244 2.719E+12
*
* SCALING FACTOR TO ADJUST THE FOR THE POWER LEVEL
*
190 RDCORSCA001 4005.0 *SCALING FACTOR (MWT)
*
* DAUGHTER INGROWTH PRODUCTS RELEASED IN THE SAME PROPORTION AS THE PARENT
*
191 RDAPLFR001 PARENT
*
*****
* OUTPUT CONTROL DATA
*****
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
*
192 OCENDAT1001 .FALSE. *SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC
*
193 OCIDEBUG001 0 *0 SKIPS DEBUG PRINTING
*
194 TYPE0NUMBER 0 *VALUE = 0 = NO ATMOSPHERIC (TYPE 0) RESULTS PRINTED
*
*****
* METEOROLOGICAL SAMPLING DATA
*****
* METEOROLOGICAL SAMPLING OPTION CODE:
*
* METCOD = 1, USER SPECIFIED DAY AND HOUR IN THE YEAR (FROM MET FILE),
* 2, WEATHER CATEGORY BIN SAMPLING,
* 3, 120 HOURS OF WEATHER SPECIFIED ON THE ATMOS USER INPUT FILE,
* 4, CONSTANT MET (BOUNDARY WEATHER USED FROM THE START),
* 5, STRATIFIED RANDOM SAMPLES FOR EACH DAY OF THE YEAR.
*****
* METEOROLOGICAL SAMPLING (M1) DATA
*****
195 M1METCOD001 2 * MET FILE PROVIDED IN ATTACHMENT C

```




Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X Non-Safety Related	Page	1.1-15 of 1.1-373
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

*
* LAST SPATIAL INTERVAL FOR MEASURED WEATHER
*

* BOUNDARY WEATHER (M2) DATA

*
196 M2LIMSPA001 10 * INTERVAL 10 = 50 MILES
*
* BOUNDARY WEATHER MIXING LAYER HEIGHT
*
197 M2BNDMXH001 1000.0 * METERS, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER STABILITY CLASS INDEX
*
198 M2IBDSTB001 4 * D-STABILITY, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER RAIN RATE
*
199 M2BNDRAN001 5.0 * MM/HR, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER WIND SPEED
*
200 M2BNDWND001 5.0 * M/S, USER'S GUIDE APPENDIX C
*

* METEOROLOGICAL BIN SAMPLING (M4) DATA

*
* NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
M4NRNINT001 5 * USER'S GUIDE APPENDIX C/NUREG 4551 APPENDIX A
*
* ENDPOINTS OF THE RAIN DISTANCE INTERVALS (KILOMETERS)
*
* NOTE: THESE MUST BE CHOSEN TO MATCH THE SPATIAL ENDPOINT DISTANCES



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X Non-Safety Related	Page	1.1-16 of 1.1-373
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

```

* SPECIFIED FOR ARRAY SPAEND (10 % ERROR IS ALLOWED)
*
*      2.0      5.0      10.0      30.0      50.0      MILES
*
202 M4RNDSTS001  3.22  8.05  16.1  48.3  80.5  *KM
*
* NUMBER OF RAIN INTENSITY BREAKPOINTS
*
203 M4NRINTN001  3      * USER'S GUIDE APPENDIX C
*
* RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
*
204 M4NRNATE001  2.0  4.0  6.0  * USER'S GUIDE APPENDIX C
*
* NUMBER OF WEATHER SAMPLES PER BIN
* USER'S GUIDE APPENDIX C USED 4. MORE SAMPLES ARE PREFERRED, BUT THIS INCREASES
* COMPUTING TIME. USED 12 IN THIS ANALYSIS - MORE ACCURATE WITH REASONABLE RUN TIME
*
205 M4NSMPLS001  12  *4 MINIMUM, 24 MAXIMUM
*
* INITIAL SEED FOR RANDOM NUMBER GENERATOR FOR WEATHER SAMPLING
*
206 M4IRSEED001  79
*****
* RELEASE DATA (2/2)
*****
*
* SOURCE TERM NUMBER 1 OF 10
*****
207 RDATNAM2001 'NCL' * SOURCE TITLE
208 RDOALARM001 6.12E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
209 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
210 RDMAXRIS001 1 * RISK-DOMINANT PLUME

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001	Equip. No.	Approved by	Date

211 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 212 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 213 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
 214 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
 215 RDPDELAY001 9.72E+03 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
 * RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
 216 RDRELFRC001 4.40E-02 0.0 2.30E-05 2.30E-05 0.0 0.0 0.0

***** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT *****

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ = 515
 NUMBER OF BLANK OR COMMENT RECORDS READ = 298
 NUMBER OF TERMINATOR RECORDS = 1
 NUMBER OF RECORDS PROCESSED = 216
 NUMBER OF PROCESSED RECORDS DUPLICATED = 0
 NUMBER OF PROCESSED RECORDS SORTED = 216

Decay Chain # Ba-139
 Decay Chain # Ba-140 La-140
 Fraction of Ba-140 going to La-140 in this chain = 1.000000
 Decay Chain # Ce-143 Pr-143
 Fraction of Ce-143 going to Pr-143 in this chain = 1.000000
 Decay Chain # Ce-144
 Decay Chain # Cm-242 Pu-238
 Fraction of Cm-242 going to Pu-238 in this chain = 1.000000



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-18 of 1.1-373

Safety Related		X	Non-Safety Related
Client PSEG Nuclear Development			
Project PSEG ESPA			
Proj. No 12380-001		Equip. No.	
Prepared by		Date	
Reviewed by		Date	
Approved by		Date	

Decay Chain # Cm-244 Pu-240
 Fraction of Cm-244 going to Pu-240 in this chain = 1.0000000

Decay Chain # Co-58

Decay Chain # Co-60

Decay Chain # Cs-134

Decay Chain # Cs-136

Decay Chain # Cs-137

Decay Chain # I-133 Xe-133
 Fraction of I-133 going to Xe-133 in this chain = 0.9710000

Decay Chain # I-134

Decay Chain # I-135 Xe-135
 Fraction of I-135 going to Xe-135 in this chain = 0.8460000

Decay Chain # Kr-85m Kr-85
 Fraction of Kr-85m going to Kr-85 in this chain = 0.2110000

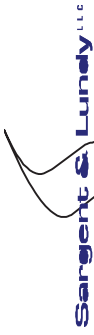
Decay Chain # Kr-87

Decay Chain # Kr-88

Decay Chain # La-141 Ce-141
 Fraction of La-141 going to Ce-141 in this chain = 1.0000000

Decay Chain # La-142

Decay Chain # Mo-99 Tc-99m



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-19 of 1.1-373

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

Fraction of Mo-99 going to Tc-99m in this chain = 0.876000

Decay Chain # Nd-147

Decay Chain # Np-239 Pu-239

Fraction of Np-239 going to Pu-239 in this chain = 1.000000

Decay Chain # Pu-241 Am-241

Fraction of Pu-241 going to Am-241 in this chain = 1.000000

Decay Chain # Rb-86

Decay Chain # Ru-103

Decay Chain # Ru-105 Rh-105

Fraction of Ru-105 going to Rh-105 in this chain = 1.000000

Decay Chain # Ru-106

Decay Chain # Sb-127 Te-127

Fraction of Sb-127 going to Te-127 in this chain = 0.824000

Decay Chain # Sb-127 Te-127m Te-127

Fraction of Sb-127 going to Te-127m in this chain = 0.176000

Fraction of Sb-127 going to Te-127 in this chain = 0.171776

Fraction of Te-127m going to Te-127 in this chain = 0.976000

Decay Chain # Sb-129 Te-129

Fraction of Sb-129 going to Te-129 in this chain = 0.775000

Decay Chain # Sb-129 Te-129m Te-129

Fraction of Sb-129 going to Te-129m in this chain = 0.225000

Fraction of Sb-129 going to Te-129 in this chain = 0.146250

Fraction of Te-129m going to Te-129 in this chain = 0.650000



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-20 of 1.1-373

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Decay Chain # Sr-89

Decay Chain # Sr-90 Y-90
 Fraction of Sr-90 going to Y-90 in this chain = 1.000000

Decay Chain # Sr-91 Y-91
 Fraction of Sr-91 going to Y-91 in this chain = 0.422000

Decay Chain # Sr-92 Y-92
 Fraction of Sr-92 going to Y-92 in this chain = 1.000000

Decay Chain # Te-131m I-131
 Fraction of Te-131m going to I-131 in this chain = 0.778000

Decay Chain # Te-132 I-132
 Fraction of Te-132 going to I-132 in this chain = 1.000000

Decay Chain # Y-93

Decay Chain # Zr-95 Nb-95
 Fraction of Zr-95 going to Nb-95 in this chain = 0.993000

Decay Chain # Zr-97

RELEASED INVENTORY OF ALL PLUMES

Kr-85 1.97E+15
 Kr-85m 1.33E+16
 Kr-87 1.27E+15
 Kr-88 1.82E+16
 Rb-86 1.58E+11
 Sb-127 7.35E+12
 Sb-129 8.00E+12
 Te-127 7.54E+12
 Te-127m 1.16E+12



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.1-21 of 1.1-373

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date

- Te-129 1.30E+13
- Te-129m 7.00E+12
- Te-131m 1.06E+13
- Te-132 1.21E+14
- I-131 2.47E+11
- I-132 1.11E+14
- Xe-133 3.45E+17
- Xe-135 2.59E+16
- Cs-134 1.83E+13
- Cs-136 3.95E+12
- Cs-137 1.13E+13

READING FROM A WEATHER FILE WITH THE FOLLOWING HEADER:

SL HC MET 2004 - SHCMET04.inp - Orig: G. Tegarden 7/22/08 Verf: M. Saunders 7/24

DAY HR DRSP S PC - Supporting Calc: SLHC-MET.XLS

METEOROLOGICAL DATA FILE CONTAINS 505 HOURS OF OBSERVED RAIN DATA.

ACCUMULATED RAIN MEASUREMENTS TOTALED 43.71 INCHES FOR THE YEAR.

CONSTANT LID HEIGHTS (M) FOR 4 SEASONS = 1000 1700 1700 1200

NON-ZERO WINDSPEEDS LESS THAN 0.5 M/S ARE SET TO 0.5 M/S

NUMTRI= 390

* * * * * METEOROLOGICAL BIN SUMMARY * * * * *

BIN PRIORITIES

RI XX - RAIN INTENSITY I WITHIN THE INTERVAL ENDING AT XX

INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5 INTERVAL ENDPOINTS ARE 3 8 16 48 80

RAIN INTENSITIES ARE IN MILLIMETERS OF RAIN PER HOUR, THE 3 INTENSITY BREAKPOINTS ARE 2.0 4.0 6.0

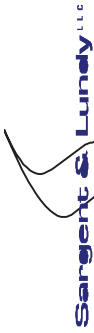
S V - INITIAL WEATHER CONDITIONS WITH STABILITY CLASS S AND WIND SPEED INTERVAL V

STABILITY CLASSES ARE B = A/B, D = C/D, E = E, AND F = F

WIND SPEED INTERVALS ARE IN METERS PER SECOND, 1 (0-1), 2 (1-2), 3 (2-3), 4 (3-5), 5 (5-7), 6 (GT 7)

WIND DIRECTION

METBIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL	PER CENT
1 B	3	0.192	0.000	0.269	0.038	0.115	0.077	0.000	0.038	0.000	0.000	0.000	0.038	0.077	0.000	0.115	26	0.2968



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date
Equip. No.		

2 B	4	0.005	0.005	0.027	0.050	0.087	0.092	0.244	0.154	0.062	0.040	0.020	0.002	0.015	0.100	0.082	402	4.5890	
3 D	1	0.000	0.030	0.061	0.000	0.000	0.061	0.030	0.091	0.091	0.212	0.121	0.091	0.121	0.030	0.000	0.061	33	0.3767
4 D	2	0.073	0.076	0.055	0.049	0.055	0.067	0.064	0.076	0.076	0.089	0.070	0.064	0.040	0.031	0.034	0.080	327	3.7329
5 D	3	0.085	0.076	0.118	0.066	0.069	0.055	0.055	0.069	0.070	0.054	0.049	0.054	0.046	0.021	0.040	0.072	669	7.6370
6 D	4	0.076	0.073	0.072	0.058	0.077	0.062	0.097	0.077	0.050	0.097	0.087	0.022	0.004	0.017	0.051	0.080	1279	14.6005
7 D	5	0.082	0.071	0.031	0.031	0.068	0.136	0.179	0.058	0.066	0.044	0.025	0.005	0.000	0.011	0.112	0.081	804	9.1781
8 D	6	0.014	0.007	0.011	0.007	0.032	0.202	0.245	0.097	0.014	0.011	0.007	0.000	0.000	0.007	0.260	0.083	277	3.1621
9 E	1	0.033	0.054	0.022	0.011	0.087	0.087	0.076	0.043	0.087	0.109	0.076	0.109	0.076	0.054	0.033	0.043	92	1.0502
10 E	2	0.035	0.046	0.053	0.064	0.059	0.057	0.073	0.064	0.059	0.092	0.088	0.090	0.101	0.031	0.033	0.055	455	5.1941
11 E	3	0.040	0.047	0.099	0.086	0.066	0.071	0.110	0.079	0.079	0.073	0.076	0.039	0.020	0.037	0.040	0.040	700	7.9909
12 E	4	0.064	0.092	0.060	0.082	0.073	0.076	0.132	0.080	0.097	0.043	0.019	0.006	0.002	0.021	0.104	0.048	1334	15.2283
13 F	1	0.083	0.021	0.063	0.021	0.063	0.104	0.042	0.021	0.021	0.125	0.042	0.125	0.042	0.125	0.104	0.000	48	0.5479
14 F	2	0.055	0.051	0.051	0.051	0.051	0.038	0.025	0.030	0.093	0.101	0.097	0.089	0.105	0.046	0.068	0.051	237	2.7055
15 F	3	0.022	0.022	0.071	0.045	0.029	0.035	0.071	0.074	0.115	0.074	0.119	0.032	0.006	0.061	0.176	0.048	312	3.5616
16 F	4	0.018	0.042	0.057	0.084	0.027	0.018	0.066	0.063	0.066	0.057	0.033	0.003	0.000	0.003	0.396	0.066	333	3.8014
17 R1	3	0.030	0.033	0.033	0.025	0.044	0.033	0.030	0.044	0.072	0.107	0.152	0.140	0.066	0.041	0.083	0.066	363	4.1438
18 R1	8	0.024	0.000	0.000	0.071	0.024	0.048	0.048	0.048	0.048	0.048	0.119	0.167	0.190	0.024	0.071	0.071	42	0.4795
19 R1	16	0.030	0.050	0.060	0.100	0.030	0.020	0.020	0.050	0.030	0.080	0.180	0.170	0.050	0.040	0.040	0.050	100	1.1416
20 R1	48	0.057	0.048	0.063	0.069	0.015	0.021	0.051	0.030	0.021	0.078	0.147	0.141	0.051	0.054	0.078	0.075	333	3.8014
21 R1	80	0.060	0.075	0.075	0.032	0.024	0.004	0.028	0.032	0.044	0.087	0.127	0.091	0.044	0.063	0.107	0.107	252	2.8767
22 R2	3	0.053	0.000	0.000	0.039	0.013	0.013	0.053	0.026	0.026	0.158	0.171	0.105	0.039	0.053	0.171	0.079	76	0.8676
23 R2	8	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.000	0.333	0.000	3	0.0342	
24 R2	16	0.000	0.100	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.100	0.000	0.300	0.100	0.200	10	0.1142
25 R2	48	0.063	0.094	0.000	0.063	0.000	0.031	0.000	0.063	0.000	0.000	0.031	0.219	0.063	0.094	0.156	0.125	32	0.3653
26 R2	80	0.065	0.065	0.097	0.000	0.000	0.000	0.000	0.032	0.000	0.032	0.097	0.290	0.097	0.032	0.161	0.032	31	0.3539
27 R3	3	0.103	0.034	0.000	0.000	0.000	0.034	0.034	0.034	0.034	0.103	0.103	0.207	0.034	0.069	0.138	0.069	29	0.3311
28 R3	8	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.333	3	0.0342	
29 R3	16	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.125	0.125	0.000	0.250	0.000	8	0.0913
30 R3	48	0.111	0.148	0.185	0.074	0.000	0.000	0.037	0.000	0.000	0.111	0.074	0.037	0.000	0.185	0.037	27	0.3082	
31 R3	80	0.100	0.033	0.167	0.000	0.000	0.000	0.100	0.000	0.000	0.100	0.067	0.000	0.033	0.200	0.200	30	0.3425	
32 R4	3	0.026	0.000	0.026	0.053	0.000	0.026	0.026	0.026	0.026	0.132	0.079	0.026	0.105	0.053	0.237	0.158	38	0.4338
34 R4	16	0.000	0.167	0.000	0.000	0.000	0.000	0.000	0.000	0.167	0.167	0.167	0.000	0.000	0.167	0.167	0.000	6	0.0685
35 R4	48	0.077	0.038	0.000	0.000	0.000	0.000	0.000	0.038	0.038	0.000	0.000	0.077	0.038	0.038	0.577	0.077	26	0.2968
36 R4	80	0.130	0.087	0.000	0.000	0.000	0.000	0.087	0.043	0.000	0.000	0.000	0.000	0.000	0.478	0.174	23	0.2626	
37 ALL		0.056	0.059	0.062	0.057	0.058	0.067	0.101	0.069	0.066	0.069	0.067	0.046	0.027	0.028	0.099	0.067	8760	



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related		Rev. 2 Date	
X Non-Safety Related		Page 1.1-23 of 1.1-373	
Client PSEG Nuclear Development		Prepared by	
Project PSEG ESPA		Reviewed by	
Proj. No 12380-001		Approved by	
Equip. No.		Date	

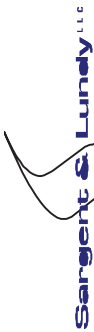
* * * * * METEOROLOGICAL BIN SUMMARY * * * * *

BIN PRIORITIES

RI XX - RAIN INTENSITY I WITHIN THE INTERVAL ENDING AT XX
 INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5 INTERVAL ENDPOINTS ARE 3 8 16 48 80
 RAIN INTENSITIES ARE IN MILLIMETERS OF RAIN PER HOUR, THE 3 INTENSITY BREAKPOINTS ARE 2.0 4.0 6.0

S V - INITIAL WEATHER CONDITIONS WITH STABILITY CLASS S AND WIND SPEED INTERVAL V
 STABILITY CLASSES ARE B = A/B, D = C/D, E = E, AND F = F
 WIND SPEED INTERVALS ARE IN METERS PER SECOND (M/S), 1 (0-1), 2 (1-2), 3 (2-3), 4 (3-5), 5 (5-7), 6 (GT 7)

METBIN	WIND DIRECTION																TOTAL	PER CENT	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
1 B	3	5	0	7	1	3	2	0	1	1	0	0	0	1	2	0	3	26	0.2968
2 B	4	2	2	11	20	35	37	98	62	25	16	8	1	6	6	40	33	402	4.5890
3 D	1	0	1	2	0	0	2	1	3	3	7	4	3	4	1	0	2	33	0.3767
4 D	2	24	25	18	16	18	22	21	25	25	29	23	21	13	10	11	26	327	3.7329
5 D	3	57	51	79	44	46	37	37	46	47	36	33	36	31	14	27	48	669	7.6370
6 D	4	97	94	92	74	99	79	124	99	64	124	111	28	5	22	65	102	1279	14.6005
7 D	5	66	57	25	25	55	109	144	47	53	35	20	4	0	9	90	65	804	9.1781
8 D	6	4	2	3	2	9	56	68	27	4	3	2	0	0	2	72	23	277	3.1621
9 E	1	3	5	2	1	8	8	7	4	8	10	7	10	7	5	3	4	92	1.0502
10 E	2	16	21	24	29	27	26	33	29	27	42	40	41	46	14	15	25	455	5.1941
11 E	3	28	33	69	60	46	50	77	55	55	51	53	27	14	26	28	28	700	7.9909
12 E	4	85	123	80	109	98	102	176	107	129	57	26	8	3	28	139	64	1334	15.2283
13 F	1	4	1	3	1	3	5	2	1	1	6	2	6	2	6	5	0	48	0.5479
14 F	2	13	12	12	12	12	9	6	7	22	24	23	21	25	11	16	12	237	2.7055
15 F	3	7	7	22	14	9	11	22	23	36	23	37	10	2	19	55	15	312	3.5616
16 F	4	6	14	19	28	9	6	22	21	22	19	11	1	0	1	132	22	333	3.8014
17 R1	3	11	12	12	9	16	12	11	16	26	39	55	51	24	15	30	24	363	4.1438
18 R1	8	1	0	0	3	1	2	2	2	2	2	5	7	8	1	3	3	42	0.4795
19 R1	16	3	5	6	10	3	2	2	5	3	8	18	17	5	4	4	5	100	1.1416
20 R1	48	19	16	21	23	5	7	17	10	7	26	49	47	17	18	26	25	333	3.8014
21 R1	80	15	19	19	8	6	1	7	8	11	22	32	23	11	16	27	27	252	2.8767
22 R2	3	4	0	0	3	1	1	4	2	2	12	13	8	3	4	13	6	76	0.8676



Calcs. For ENVIRONMENTAL CONSEQUENCE ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.1-24 of 1.1-373

	Safety Related	X	Non-Safety Related	Prepared by	Date
Client	PSEG Nuclear Development				
Project	PSEG ESPA				
Proj. No	12380-001			Equip. No.	

23 R2	8	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0.0342
24 R2	16	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	3	1	2	10	0.1142
25 R2	48	2	3	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7	5	4	3	5	4	32	0.3653
26 R2	80	2	2	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	9	5	1	3	5	1	31	0.3539
27 R3	3	3	1	0	0	0	1	1	1	1	1	3	3	6	1	2	4	2	2	6	4	2	2	4	2	29	0.3311
28 R3	8	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0.0342
29 R3	16	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	2	0	8	0.0913
30 R3	48	3	4	5	2	0	0	1	0	0	0	0	0	3	2	1	0	0	3	2	5	1	0	5	1	27	0.3082
31 R3	80	3	1	5	0	0	0	3	0	0	0	0	0	3	2	0	1	6	6	6	6	6	6	6	30	0.3425	
32 R4	3	1	0	1	2	0	1	1	1	1	1	5	3	1	4	2	9	6	38	1	9	6	6	38		0.4338	
33 R4	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0000
34 R4	16	0	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	6	0	1	1	1	1	0	6	0.0685	
35 R4	48	2	1	0	0	0	0	0	0	1	1	0	0	2	1	15	2	26	0	2	15	2	26	2	26	0.2968	
36 R4	80	3	2	0	0	0	0	2	1	0	0	0	0	0	0	0	0	23	0	0	0	0	0	4	23	0.2626	

* * * * * SUMMARIES * * * * *

R	74	71	74	62	32	28	51	50	55	120	190	185	81	72	168	119	1432	16.3470
B	7	2	18	21	38	39	98	63	26	16	8	1	7	8	40	36	428	4.8858
D	248	230	219	161	227	305	395	247	196	234	193	92	53	58	265	266	3389	38.6872
E	132	182	175	199	179	186	293	195	219	160	126	86	70	73	185	121	2581	29.4635
F	30	34	56	55	33	31	52	52	81	72	73	38	29	37	208	49	930	10.6164
1	7	7	7	2	11	15	10	8	12	23	13	19	13	12	8	6	173	1.9749
2	54	58	54	57	58	58	60	61	74	95	86	83	84	36	42	63	1023	11.6781
3	96	91	177	119	103	99	136	125	139	110	123	73	48	60	110	94	1703	19.4406
4	165	199	185	218	208	191	279	213	190	200	152	37	14	55	249	174	2729	31.1530
5	91	85	40	36	83	131	245	116	96	51	24	5	0	11	205	100	1319	15.0571
6	4	8	5	4	14	67	108	34	11	3	2	0	0	2	84	35	381	4.3493



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.1-27 of 1.1-373

Client	PSEG Nuclear Development			Prepared by	Date
Project	PSEG ESPA			Reviewed by	Date
Proj. No	12380-001			Approved by	Date

	33	0.052	0.050	0.052	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000	34	0.052	0.050	0.052	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000	35	0.052	0.050	0.052	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000	36	0.052	0.050	0.052	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000	37	0.056	0.059	0.062	0.057	0.058	0.067	0.101	0.069	0.066	0.069	0.067	0.046	0.027	0.028	0.099	0.067

***** BEGINNING OF CHANGE CASE 1 USER INPUT *****
 ***** SOURCE TERM NUMBER 2 OF 10 *****

217 RDATNAM2001 'Case 1' * SOURCE TITLE
 ***** RECORD NUMBER 217 REPLACES RECORD NUMBER 207 *****
 218 RDOALARM001 6.91E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 ***** RECORD NUMBER 218 REPLACES RECORD NUMBER 208 *****
 219 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 ***** RECORD NUMBER 219 REPLACES RECORD NUMBER 209 *****
 220 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 ***** RECORD NUMBER 220 REPLACES RECORD NUMBER 210 *****
 221 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 ***** RECORD NUMBER 221 REPLACES RECORD NUMBER 211 *****
 222 RDPHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 ***** RECORD NUMBER 222 REPLACES RECORD NUMBER 212 *****
 223 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
 ***** RECORD NUMBER 223 REPLACES RECORD NUMBER 213 *****
 224 RDPLUDUR001 3.60E+03 * DURATION OF PLUMES
 ***** RECORD NUMBER 224 REPLACES RECORD NUMBER 214 *****
 225 RDPDELAY001 7.20E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
 ***** RECORD NUMBER 225 REPLACES RECORD NUMBER 215 *****



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 4 Grp. 5 Grp. 6 Grp. 7
 226 RDRELFRC001 1.00E+00 0.0 1.50E-07 1.30E-05 0.0 0.0 0.0
 ***** RECORD NUMBER 226 REPLACES RECORD NUMBER 216 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 1 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 1
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

Kr-85 4.47E+16
 Kr-85m 4.18E+16
 Kr-87 2.69E+13
 Kr-88 1.82E+16
 Rb-86 1.01E+09
 Sb-127 3.77E+12
 Sb-129 5.80E+11
 Te-127 4.03E+12
 Te-127m 6.57E+11
 Te-129 3.17E+12
 Te-129m 3.92E+12
 Te-131m 4.47E+12
 Te-132 6.09E+13
 I-131 3.15E+11
 I-132 6.26E+13
 Xe-133 7.32E+18
 Xe-135 2.22E+17
 Cs-134 1.19E+11
 Cs-136 2.51E+10
 Cs-137 7.39E+10



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-29 of 1.1-373

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

```

***** BEGINNING OF CHANGE CASE 2 USER INPUT *****
***** SOURCE TERM NUMBER 3 OF 10 *****
*****
227 RDATNAM2001 'Case 2' * SOURCE TITLE
***** RECORD NUMBER 227 REPLACES RECORD NUMBER 207 *****
228 RDOALARM001 6.55E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 228 REPLACES RECORD NUMBER 208 *****
229 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 229 REPLACES RECORD NUMBER 209 *****
230 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 230 REPLACES RECORD NUMBER 210 *****
231 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 231 REPLACES RECORD NUMBER 211 *****
232 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 232 REPLACES RECORD NUMBER 212 *****
233 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 233 REPLACES RECORD NUMBER 213 *****
234 RDPLUDUR001 3.60E+03 * DURATION OF PLUMES
***** RECORD NUMBER 234 REPLACES RECORD NUMBER 214 *****
235 RDPDELAY001 6.84E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
***** RECORD NUMBER 235 REPLACES RECORD NUMBER 215 *****
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
236 RDRELFRC001 1.00E+0 0.0 5.00E-06 5.00E-06 0.0 0.0 0.0
***** RECORD NUMBER 236 REPLACES RECORD NUMBER 216 *****
***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 2 USER INPUT *****

```

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 2
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X	Page	1.1-30 of 1.1-373
Non-Safety Related		Prepared by	Date
Client PSEG Nuclear Development		Reviewed by	Date
Project PSEG ESPA		Approved by	Date
Proj. No 12380-001		Equip. No.	

RELEASED INVENTORY OF ALL PLUMES

Kr-85 4.47E+16
 Kr-85m 4.88E+16
 Kr-87 4.63E+13
 Kr-88 2.32E+16
 Rb-86 3.37E+10
 Sb-127 1.46E+12
 Sb-129 2.62E+11
 Te-127 1.56E+12
 Te-127m 2.53E+11
 Te-129 1.26E+12
 Te-129m 1.51E+12
 Te-131m 1.76E+12
 Te-132 2.36E+13
 I-131 1.17E+11
 I-132 2.43E+13
 Xe-133 7.36E+18
 Xe-135 2.39E+17
 Cs-134 3.97E+12
 Cs-136 8.37E+11
 Cs-137 2.46E+12

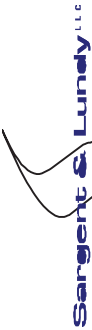
***** BEGINNING OF CHANGE CASE 3 USER INPUT *****

***** SOURCE TERM NUMBER 4 OF 10 *****

237 RDATNAM2001 'Case 3' * SOURCE TITLE

***** RECORD NUMBER 237 REPLACES RECORD NUMBER 207 *****

238 RDOALARM001 1.77E+05 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-31 of 1.1-373

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

```

***** RECORD NUMBER 238 REPLACES RECORD NUMBER 208 *****
239 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 239 REPLACES RECORD NUMBER 209 *****
240 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 240 REPLACES RECORD NUMBER 210 *****
241 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 241 REPLACES RECORD NUMBER 211 *****
242 RDPHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 242 REPLACES RECORD NUMBER 212 *****
243 RDPWHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 243 REPLACES RECORD NUMBER 213 *****
244 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
***** RECORD NUMBER 244 REPLACES RECORD NUMBER 214 *****
245 RDPDELAY001 1.80E+05 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
***** RECORD NUMBER 245 REPLACES RECORD NUMBER 215 *****
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
246 RDRELFRC001 1.00E+0 0.0 2.80E-04 2.20E-03 0.0 0.0 0.0
***** RECORD NUMBER 246 REPLACES RECORD NUMBER 216 *****

```

```

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 3 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 3
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0
*****

```

```

RELEASED INVENTORY OF ALL PLUMES
Kr-85 4.47E+16
Kr-85m 2.01E+14
Kr-87 1.83E+05
Kr-88 4.01E+12
Rb-86 1.79E+12

```



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.1-32 of 1.1-373

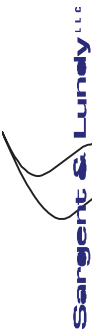
Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

- Sb-127 4.93E+14
- Sb-129 3.87E+11
- Te-127 5.59E+14
- Te-127m 1.11E+14
- Te-129 4.20E+14
- Te-129m 6.44E+14
- Te-131m 3.41E+14
- Te-132 7.59E+15
- I-131 9.40E+13
- I-132 7.82E+15
- Xe-133 6.05E+18
- Xe-135 1.60E+16
- Cs-134 2.22E+14
- Cs-136 4.33E+13
- Cs-137 1.38E+14

```

***** BEGINNING OF CHANGE CASE 4 USER INPUT *****
***** SOURCE TERM NUMBER 5 OF 10 *****
*
247 RDATNAM2001 'Case 4' * SOURCE TITLE
***** RECORD NUMBER 247 REPLACES RECORD NUMBER 207 *****
248 RDOALARM001 6.91E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 248 REPLACES RECORD NUMBER 208 *****
249 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 249 REPLACES RECORD NUMBER 209 *****
250 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 250 REPLACES RECORD NUMBER 210 *****
251 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 251 REPLACES RECORD NUMBER 211 *****
252 RDPHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 252 REPLACES RECORD NUMBER 212 *****
253 RDPWHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

***** RECORD NUMBER 253 REPLACES RECORD NUMBER 213 *****
254 RDPLUDUR001 3.60E+03 * DURATION OF PLUMES
***** RECORD NUMBER 254 REPLACES RECORD NUMBER 214 *****
255 RDPDELAY001 7.20E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
***** RECORD NUMBER 255 REPLACES RECORD NUMBER 215 *****
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
256 RDRELFRC001 1.00E+0 0.0 1.60E-03 1.60E-03 0.0 0.0 0.0
***** RECORD NUMBER 256 REPLACES RECORD NUMBER 216 *****

```

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 4 USER INPUT *****

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 4
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0

```

RELEASED INVENTORY OF ALL PLUMES

```

Kr-85 4.47E+16
Kr-85m 4.18E+16
Kr-87 2.69E+13
Kr-88 1.82E+16
Rb-86 1.08E+13
Sb-127 4.64E+14
Sb-129 7.14E+13
Te-127 4.96E+14
Te-127m 8.09E+13
Te-129 3.90E+14
Te-129m 4.82E+14
Te-131m 5.50E+14
Te-132 7.50E+15
I-131 3.88E+13
I-132 7.70E+15

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-34	of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

Xe-133 7.32E+18
 Xe-135 2.22E+17
 Cs-134 1.27E+15
 Cs-136 2.67E+14
 Cs-137 7.88E+14

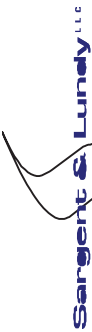
***** BEGINNING OF CHANGE CASE 5 USER INPUT *****

 * SOURCE TERM NUMBER 6 OF 10

*

 257 RDATNAM2001 'Case 5' * SOURCE TITLE
 ***** RECORD NUMBER 257 REPLACES RECORD NUMBER 207 *****
 258 RDOALARM001 6.55E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 ***** RECORD NUMBER 258 REPLACES RECORD NUMBER 208 *****
 259 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 ***** RECORD NUMBER 259 REPLACES RECORD NUMBER 209 *****
 260 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 ***** RECORD NUMBER 260 REPLACES RECORD NUMBER 210 *****
 261 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 ***** RECORD NUMBER 261 REPLACES RECORD NUMBER 211 *****
 262 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 ***** RECORD NUMBER 262 REPLACES RECORD NUMBER 212 *****
 263 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
 ***** RECORD NUMBER 263 REPLACES RECORD NUMBER 213 *****
 264 RDPLUDUR001 3.60E+03 * DURATION OF PLUMES
 ***** RECORD NUMBER 264 REPLACES RECORD NUMBER 214 *****
 265 RDPDELAY001 6.84E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
 ***** RECORD NUMBER 265 REPLACES RECORD NUMBER 215 *****
 * RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
 266 RDRELFR001 1.00E+0 0.0 6.00E-03 5.30E-04 0.0 0.0 0.0
 ***** RECORD NUMBER 266 REPLACES RECORD NUMBER 216 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 5 USER INPUT *****



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

USER INPUT PROCESSING SUMMARY - CHANGE CASE 5
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

- Kr-85 4.47E+16
- Kr-85m 4.88E+16
- Kr-87 4.63E+13
- Kr-88 2.32E+16
- Rb-86 4.05E+13
- Sb-127 1.55E+14
- Sb-129 2.78E+13
- Te-127 1.65E+14
- Te-127m 2.68E+13
- Te-129 1.33E+14
- Te-129m 1.60E+14
- Te-131m 1.87E+14
- Te-132 2.51E+15
- I-131 1.24E+13
- I-132 2.57E+15
- Xe-133 7.36E+18
- Xe-135 2.39E+17
- Cs-134 4.76E+15
- Cs-136 1.00E+15
- Cs-137 2.96E+15

***** BEGINNING OF CHANGE CASE 6 USER INPUT *****

* SOURCE TERM NUMBER 7 OF 10



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-36 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date
Equip. No.		

```

267 RDATNAM2001 'Case 6' * SOURCE TITLE
***** RECORD NUMBER 267 REPLACES RECORD NUMBER 207 *****
268 RDOALARM001 6.55E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 268 REPLACES RECORD NUMBER 208 *****
269 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 269 REPLACES RECORD NUMBER 209 *****
270 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 270 REPLACES RECORD NUMBER 210 *****
271 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 271 REPLACES RECORD NUMBER 211 *****
272 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 272 REPLACES RECORD NUMBER 212 *****
273 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 273 REPLACES RECORD NUMBER 213 *****
274 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
***** RECORD NUMBER 274 REPLACES RECORD NUMBER 214 *****
275 RDPDELAY001 6.84E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
***** RECORD NUMBER 275 REPLACES RECORD NUMBER 215 *****
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
276 RDRELFRC001 1.00E+0 0.0 3.10E-02 7.70E-02 0.0 0.0 0.0
***** RECORD NUMBER 276 REPLACES RECORD NUMBER 216 *****

```

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 6 USER INPUT *****

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 6
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0

```

RELEASED INVENTORY OF ALL PLUMES



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-37 of 1.1-373

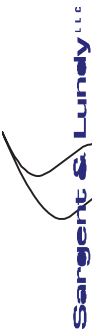
Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

Kr-85	4.47E+16
Kr-85m	2.43E+16
Kr-87	3.99E+12
Kr-88	7.75E+15
Rb-86	2.08E+14
Sb-127	2.18E+16
Sb-129	1.96E+15
Te-127	2.34E+16
Te-127m	3.89E+15
Te-129	1.71E+16
Te-129m	2.31E+16
Te-131m	2.44E+16
Te-132	3.50E+17
I-131	2.09E+15
I-132	3.60E+17
Xe-133	7.18E+18
Xe-135	1.70E+17
Cs-134	2.46E+16
Cs-136	5.14E+15
CS-137	1.53E+16

```

***** BEGINNING OF CHANGE CASE 7 USER INPUT *****
***** SOURCE TERM NUMBER 8 OF 10 *****
***** SOURCE TERM NUMBER 8 OF 10 *****
*****
277 RDATNAM2001 'Case 7' * SOURCE TITLE
***** RECORD NUMBER 277 REPLACES RECORD NUMBER 207 *****
278 RDOALARM001 6.91E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 278 REPLACES RECORD NUMBER 208 *****
279 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 279 REPLACES RECORD NUMBER 209 *****
280 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 280 REPLACES RECORD NUMBER 210 *****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

281 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 ***** RECORD NUMBER 281 REPLACES RECORD NUMBER 211 *****
 282 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 ***** RECORD NUMBER 282 REPLACES RECORD NUMBER 212 *****
 283 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
 ***** RECORD NUMBER 283 REPLACES RECORD NUMBER 213 *****
 284 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
 ***** RECORD NUMBER 284 REPLACES RECORD NUMBER 214 *****
 285 RDPDELAY001 7.20E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
 ***** RECORD NUMBER 285 REPLACES RECORD NUMBER 215 *****
 * RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
 286 RDRELFRC001 1.00E+0 0.0 8.90E-02 9.90E-02 0.0 0.0 0.0
 ***** RECORD NUMBER 286 REPLACES RECORD NUMBER 216 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 7 USER INPUT *****
 USER INPUT PROCESSING SUMMARY - CHANGE CASE 7
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

Kr-85 4.47E+16
 Kr-85m 2.09E+16
 Kr-87 2.31E+12
 Kr-88 6.07E+15
 Rb-86 5.96E+14
 Sb-127 2.78E+16
 Sb-129 2.15E+15
 Te-127 3.00E+16
 Te-127m 5.01E+15
 Te-129 2.16E+16



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-39 of 1.1-373

Client PSEG Nuclear Development	Safety Related	Non-Safety Related
Project PSEG ESPA	X	
Proj. No 12380-001	Equip. No.	

Prepared by	Date
Reviewed by	Date
Approved by	Date

Te-129m 2.97E+16
 Te-131m 3.07E+16
 Te-132 4.46E+17
 I-131 2.76E+15
 I-132 4.59E+17
 Xe-133 7.14E+18
 Xe-135 1.57E+17
 Cs-134 7.06E+16
 Cs-136 1.47E+16
 Cs-137 4.38E+16

***** BEGINNING OF CHANGE CASE 8 USER INPUT *****
 ***** SOURCE TERM NUMBER 9 OF 10 *****

287 RDATNAM2001 'Case 8' * SOURCE TITLE
 ***** RECORD NUMBER 287 REPLACES RECORD NUMBER 207 *****
 288 RDOALARM001 4.32E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 ***** RECORD NUMBER 288 REPLACES RECORD NUMBER 208 *****
 289 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 ***** RECORD NUMBER 289 REPLACES RECORD NUMBER 209 *****
 290 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 ***** RECORD NUMBER 290 REPLACES RECORD NUMBER 210 *****
 291 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 ***** RECORD NUMBER 291 REPLACES RECORD NUMBER 211 *****
 292 RDPLHEAT001 4.18E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 ***** RECORD NUMBER 292 REPLACES RECORD NUMBER 212 *****
 293 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
 ***** RECORD NUMBER 293 REPLACES RECORD NUMBER 213 *****
 294 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
 ***** RECORD NUMBER 294 REPLACES RECORD NUMBER 214 *****
 295 RDPDELAY001 7.20E+03 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
 ***** RECORD NUMBER 295 REPLACES RECORD NUMBER 215 *****



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

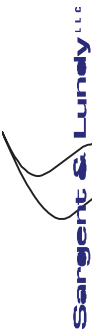
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
 296 RDRELFRC001 1.00E+0 0.0 1.90E-01 2.50E-01 0.0 0.0 0.0
 ***** RECORD NUMBER 296 REPLACES RECORD NUMBER 216 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 8 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 8
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

Kr-85 4.47E+16
 Kr-85m 3.38E+17
 Kr-87 4.22E+16
 Kr-88 4.91E+17
 Rb-86 1.31E+15
 Sb-127 8.03E+16
 Sb-129 9.73E+16
 Te-127 8.21E+16
 Te-127m 1.26E+16
 Te-129 1.51E+17
 Te-129m 7.61E+16
 Te-131m 1.17E+17
 Te-132 1.32E+18
 I-131 2.46E+15
 I-132 1.18E+18
 Xe-133 7.88E+18
 Xe-135 6.21E+17
 Cs-134 1.51E+17
 Cs-136 3.27E+16
 Cs-137 9.36E+16



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X Non-Safety Related	Page	1.1-41 of 1.1-373
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

***** BEGINNING OF CHANGE CASE 9 USER INPUT *****
***** SOURCE TERM NUMBER 10 OF 10 *****
*****
397 RDATNAM2001 'Case 9' * SOURCE TITLE
***** RECORD NUMBER 297 REPLACES RECORD NUMBER 207 *****
298 RDOALARM001 4.39E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 298 REPLACES RECORD NUMBER 208 *****
299 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 299 REPLACES RECORD NUMBER 209 *****
300 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 300 REPLACES RECORD NUMBER 210 *****
301 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 301 REPLACES RECORD NUMBER 211 *****
302 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 302 REPLACES RECORD NUMBER 212 *****
303 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 303 REPLACES RECORD NUMBER 213 *****
304 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
***** RECORD NUMBER 304 REPLACES RECORD NUMBER 214 *****
305 RDPDELAY001 8.50E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
***** RECORD NUMBER 305 REPLACES RECORD NUMBER 215 *****
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
306 RDRELFRC001 1.00E+0 0.0 3.70E-01 3.60E-01 0.0 0.0 0.0
***** RECORD NUMBER 306 REPLACES RECORD NUMBER 216 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 9 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 9
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

RELEASED INVENTORY OF ALL PLUMES

Kr-85 4.47E+16
 Kr-85m 1.19E+16
 Kr-87 3.23E+11
 Kr-88 2.52E+15
 Rb-86 2.46E+15
 Sb-127 9.83E+16
 Sb-129 4.37E+15
 Te-127 1.07E+17
 Te-127m 1.82E+16
 Te-129 7.48E+16
 Te-129m 1.08E+17
 Te-131m 1.03E+17
 Te-132 1.57E+18
 I-131 1.10E+16
 I-132 1.62E+18
 Xe-133 7.00E+18
 Xe-135 1.20E+17
 Cs-134 2.93E+17
 Cs-136 6.07E+16
 Cs-137 1.82E+17

USER INPUT IS READ FROM UNIT 25
 RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.
 THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
 THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

RECORD NUMBER RECORD



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

*****
* FILE NAME: E.2.INP
*
* Sargent & Lundy (10/2009)
*
*****
* DOSE CONVERSION FILE DATA
*****
*DOSE CONVERSION FACTOR FILENAME
1 DCF_FILE001 'C:\MACCS2\DOSDATA.INP'
*
*****
* MISCELLANEOUS DATA
*****
2 DESCRIPTIVE TITLE DESCRIBING THIS "EARLY" INPUT FILE
*
3 MIEANAM1001 'GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS '
*
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
* FALSE ASSIGNED BECAUSE CHRONC IS TO BE RUN AFTER EARLY
*
4 MIENDAT2001 .FALSE.
*
* DISPERSION MODEL OPTION CODE:
* USER'S GUIDE APPENDIC C/NUREG 4551 APPENDIX A
* 1 * STRAIGHT LINE
* 2 * WIND-SHIFT WITH ROTATION
* 3 * WIND-SHIFT WITHOUT ROTATION
*
5 MIIPLUME001 2
*
* NUMBER OF FINE GRID SUBDIVISIONS USED BY THE MODEL
* 3, 5 OR 7 ALLOWED
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.1-44 of 1.1-373
Non-Safety Related		Prepared by	
		Date	
Client	PSEG Nuclear Development	Reviewed by	
Project	PSEG ESPA	Date	
Proj. No	12380-001	Approved by	
	Equip. No.	Date	

```

6 MINUMFIN001 7
*
* LEVEL OF DEBUG OUTPUT REQUIRED, NORMAL RUNS SHOULD SPECIFY ZERO (MINIMUM DEBUG OUTPUT)
*
7 MIIPRINT001 0
*
* LOGICAL FLAG SIGNIFYING THAT THE RISK CONTRIBUTION TABLES ARE NOT TO BE PRINTED
*
* RISBIN
*
8 MIRISCAT001 .FALSE.
*
* FLAG INDICATING WIND-ROSES FROM ATMOS ARE TO USED
*
9 MIOVRRID001 .FALSE.
*
*****
* ORGAN DEFINITION (OD) DATA
*****
*
* ORGANS TO BE USED FOR HEALTH EFFECTS
*
*
* ORGNAM ORGFLG
*
10 MIOGDEF001 'A-SKIN' .TRUE.
11 MIOGDEF002 'A-RED MARR' .TRUE.
12 MIOGDEF003 'A-LUNGS' .TRUE.
13 MIOGDEF004 'A-THYROIDH' .TRUE.
14 MIOGDEF005 'A-STOMACH' .TRUE.
15 MIOGDEF006 'A-LOWER LI' .TRUE.
16 MIOGDEF007 'L-EDEWBODY' .TRUE.
17 MIOGDEF008 'L-RED MARR' .TRUE.
18 MIOGDEF009 'L-BONE SUR' .TRUE.
19 MIOGDEF010 'L-BREAST' .TRUE.
20 MIOGDEF011 'L-LUNGS' .TRUE.
21 MIOGDEF012 'L-THYROID' .TRUE.

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-45 of 1.1-373

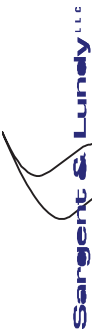
Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

```

22 MIORGDEF013 'L-LOWER LI' .TRUE.
23 MIORGDEF014 'L-BLAD WAL' .TRUE.
24 MIORGDEF015 'L-LIVER' .TRUE.
25 MIORGDEF016 'L-THYROIDH' .TRUE.
*
*****
* POPULATION DISTRIBUTION (PD) DATA
*****
* FLAG INDICATES THAT THE POPULATION DATA IS PROVIDED IN A SEPARATE FILE
*
26 PDPOPF1G001 FILE
*
*****
* SHIELDING AND EXPOSURE (SE) DATA
*****
*
* THREE VALUES OF EACH PROTECTION FACTOR ARE SUPPLIED,
* ONE FOR EACH TYPE OF ACTIVITY:
*
* ACTIVITY TYPE:
* 1 - EVACUEES WHILE MOVING
* 2 - NORMAL ACTIVITY IN SHELTERING AND EVACUATION ZONE
* 3 - SHELTERED ACTIVITY
*
* CLOUD SHIELDING FACTORS
*
* EVACUEES NORMAL SHELTER
27 SECSFACT001 1. 0.75 0.6
*
* PROTECTION FACTORS FOR INHALATION
*
* EVACUEES NORMAL SHELTER
28 SEPROTIN001 1. 0.41 0.33
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-46 of 1.1-373

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

```

* BREATHING RATES (CUBIC METERS PER SECOND)
*
* EVACUEES NORMAL SHELTER
29 SEBRRATE001 2.66E-4 2.66E-4 2.66E-4
*
* SKIN PROTECTION FACTORS
*
* EVACUEES NORMAL SHELTER
30 SESKPFAC001 1.0 0.41 0.33
*
* GROUND SHIELDING FACTORS
*
* EVACUEES NORMAL SHELTER
31 SEGSHFAC001 0.5 0.33 0.2
*
* RESUSPENSION INHALATION MODEL CONCENTRATION COEFFICIENT (SEC/METER)
*
32 SERESCON001 1.E-4
*
* RESUSPENSION CONCENTRATION COEFFICIENT HALF-LIFE (SEC)
*
33 SERESHAF001 1.82E5
*
*****
* EVACUATION ZONE DATA BLOCK
*****
*
* SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
*
34 EZEANAM2001 '95% EVACUATION'
*
* THE TYPE OF WEIGHTING TO BE APPLIED TO THE EMERGENCY RESPONSE SCENARIOS
* (A VALUE OF 'TIME' OR 'PEOPLE')
*
35 EZWTNAME001 'PEOPLE'

```




Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* * WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO

* * 95% OF PEOPLE EVACUATED

36 EZWTFRAC001 0.95

* * LAST RING IN THE MOVEMENT ZONE

* * (RING 6 CORRESPONDS TO 60 MILES - NO EXPOSURE AFTER TRAVELING TO 10 MILES)

37 EZLASM0V001 6

* * FLAG DEFINING THE TIME AT WHICH EVACUEES "ENTER" THE DESTINATION ELEMENT

38 TRAVELPOINT 'BOUNDARY'

* * RADIAL EVACUATION SPEED (M/S), SPEED TO EXIT EPZ ONCE TRAVEL BEGINS

* * 95 MIN TRAVEL TIME TO CLEAR EPZ (10 MILES)

39 EZESPEED001 2.8 2.8 2.8

* * EVACUATION IS BASED ON A RADIAL EVACUATION

40 EZEVATYP001 'RADIAL'

* *THE DURATION (SECONDS) OF THE EARLY PHASE OF EVACUATION (1440 HOURS)

41 EZDURBEG001 86400.0

* *THE DURATION (SECONDS) OF THE MIDDLE PHASE OF EVACUATION

42 EZDURMID001 0.0

* * CONTROL FLAG INDICATING THAT THE INITIATION OF SHELTERING AND

* * EVACUATION ACTIONS WILL OCCUR AT THE OFF-SITE ALARM TIME (ATMOS INPUT VARIABLE)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

Page	1.1-48	of	1.1-373
------	--------	----	---------

43 EZREFPNT001 'ALARM'

* THE NUMBER OF CONCENTRIC RINGS IN WHICH EVACUATION AND/OR SHELTERING CAN OCCUR FOR

* THE RESIDENT POPULATION

44 EZNUMEVA001 6

* FOR EACH DISTANCE RING IN THE SHELTER/EVACUATION REGION - THE DELAY TO TAKE SHELTER

* (SECONDS) FOR RESIDENT INDIVIDUALS (65 MIN DELAY)

45 EZDLTSHL001 3900. 3900. 3900. 3900. 3900.

* DELAY FROM SHELTER TO EVAC

46 EZDLTEVA001 0. 0. 0. 0. 0.

* SHELTER AND RELOCATION (SR) ZONE DATA

* DURATION OF THE EMERGENCY PHASE (SECONDS FROM PLUME ARRIVAL)

* (ONE WEEK)

47 SRENDEMP001 604800.

* CRITICAL ORGAN FOR RELOCATION DECISIONS

* NUREGR 4551, APPENDIX A and HC ER

* EDEWBODY - EFFECTIVE WHOLE-BODY DOSE EQUIVALENT

48 SRCRIORG001 'L-EDEWBODY'

* HOT SPOT RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)

* ONE-HALF DAY, NUREGR 4551, APPENDIX A

49 SRTIMHOT001 43200.



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*
*   NORMAL RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
*   ONE DAY, NUREGR 4551, APPENDIX A and HC ER
*
50  SRTIMNRM001  86400.
*
*   HOT SPOT RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
*   (1 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)
*   HC ER
*
51  SRDOSHOT001  0.01
*
*   NORMAL RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
*   (1 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)
*   HC ER
*
52  SRDOSNRM001  0.01
*
*****
*   EARLY FATALITY (DF) DATA
*****
*
*   NUMBER OF EARLY FATALITY EFFECTS
*   HC ER
*
53  EFNUMEFA001  3
*
*   ORGNAM          EFFACA  EFFACB  EFFTHR
*
54  EFATAGRP001  'A-RED MARR'  3.8    5.0    1.5
55  EFATAGRP002  'A-LUNGS'    10.0   7.0    5.0
56  EFATAGRP003  'A-LOWER LI'  15.0  10.0   8.0
*
*****
*   EARLY INJURY MODEL PARAMETERS
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* NUMBER OF EARLY INJURY EFFECTS

57 EINUMEIN001 0

* LATENT CANCER (LC) PARAMETERS

* NUMBER OF LATENT CANCER EFFECTS

58 LCNUMACA001 7

* THRESHOLD DOSE FOR APPLYING THE DOSE DEPENDENT REDUCTION FACTOR

59 LCDDTHRE001 0.2 (20 REM, BELOW WHICH DDREFA WILL BE APPLIED)

* DOSE THRESHOLD FOR LINEAR DOSE RESPONSE (SV)

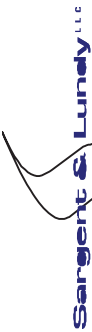
* LINEAR MODEL (QUADRATIC MODEL IS NOT BEING USED)

60 LCACHTHRE001 0.0

* ACNAME ORGNAM ACSUSC DOSEFA DOSEFB CFRISK CIRISK DDREFA

61	LCANCERS001	'LEUKEMIA'	1.0	1.0	0.0	9.70E-3	0.0	2.0
62	LCANCERS002	'BONE'	1.0	1.0	0.0	1.20E-4	0.0	2.0
63	LCANCERS003	'BREAST'	1.0	1.0	0.0	5.40E-3	1.7E-2	1.0
64	LCANCERS004	'LUNG'	1.0	1.0	0.0	1.55E-2	0.0	2.0
65	LCANCERS005	'THYROID'	1.0	1.0	0.0	7.20E-4	7.2E-3	1.0
66	LCANCERS006	'GI'	1.0	1.0	0.0	3.36E-2	0.0	2.0
67	LCANCERS007	'OTHER'	1.0	1.0	0.0	2.76E-2	0.0	2.0

* RESULT 1 - TOTAL NUMBER OF A GIVEN EFFECT (LATENT CANCER, EARLY DEATH)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-51 of 1.1-373

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

* NUMBER OF DESIRED RESULTS OF THIS TYPE

68 TYPE1NUMBER 5

* NAME I1DIS1 I2DIS1

69	TYPE1OUT001	'CAN FAT/TOTAL'	1	10	* 0 to 50 miles
70	TYPE1OUT002	'CAN FAT/TOTAL'	1	6	* 0 to 10 miles
71	TYPE1OUT003	'ERL FAT/TOTAL'	1	10	* 0 to 50 miles
72	TYPE1OUT004	'ERL FAT/TOTAL'	1	2	* 0 to 2 miles
73	TYPE1OUT005	'ERL FAT/TOTAL'	1	1	* 0 to 1 miles

* RESULT 2 - FURTHEST DISTANCE AT WHICH A GIVEN RISK OF EARLY DEATH IS EXCEEDED

* NUMBER OF DESIRED RESULTS OF THIS TYPE

74 TYPE2NUMBER 0

* RESULT 3 - POPULATION EXCEEDING A DOSE THRESHOLD

* NUMBER OF DESIRED RESULTS OF THIS TYPE

75 TYPE3NUMBER 2

76	TYPE3OUT001	'L-EDEWBODY'	2.0	* 2 Sv = 200 rem
77	TYPE3OUT002	'L-EDEWBODY'	0.25	* 0.25 Sv = 25 rem

* RESULT 4 - AVERAGE INDIVIDUAL RISK



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.1-52 of 1.1-373

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

* NUMBER OF DESIRED RESULTS OF THIS TYPE

78 TYPE4NUMBER 0

* RESULT 5 - POPULATION DOSE

* NUMBER OF DESIRED RESULTS OF THIS TYPE

79 TYPE5NUMBER 2

* NAME I1DIS5 I2DIS5

80 TYPE5OUT001 'L-EDEWBODY' 1 6 * 0 to 10 miles

81 TYPE5OUT002 'L-EDEWBODY' 1 10 * 0 to 50 miles

* RESULT 6 - CENTERLINE DOSE VS. DISTANCE

* NUMBER OF DESIRED RESULTS OF THIS TYPE

82 TYPE6NUMBER 0

* RESULT 7 - CENTERLINE RISK VS. DISTANCE

83 TYPE7NUMBER 0

* RESULT 8 - POPULATION-WEIGHTED RISK



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

*****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
84 TYPE8NUMBER 6
*
* NAME I1DIS8 I2DIS8
*
85 TYPE8OUT001 'ERL FAT/TOTAL' 1 10 *0-50 MILES
86 TYPE8OUT002 'ERL FAT/TOTAL' 1 2 *0- 2 MILES
87 TYPE8OUT003 'ERL FAT/TOTAL' 1 1 *0- 1 MILES
88 TYPE8OUT004 'ERL FAT/TOTAL' 3 3 *2- 3 MILES
89 TYPE8OUT005 'CAN FAT/TOTAL' 1 10 *0-50 MILES
90 TYPE8OUT006 'CAN FAT/TOTAL' 1 6 *0-10 MILES
*
*****
* RESULT A - PEAK DOSE AT A DISTANCE
*
*
* NUMA
* TYPEANUMBER 1
*
* NAME I1DISA I2DISA
* TYPEAOUT001 'L-EDEWBODY' 1 1 CCDF
*
*****
* RESULT B - PEAK DOSE AT AN (r, theta) LOCATION
*
*****
*
* TYPEBNUMBER 0
*
*****
* TERMINATOR CARD
*
*****
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

***** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT *****

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ = 386
 NUMBER OF BLANK OR COMMENT RECORDS READ = 292
 NUMBER OF TERMINATOR RECORDS = 1
 NUMBER OF RECORDS PROCESSED = 93
 NUMBER OF PROCESSED RECORDS DUPLICATED = 0
 NUMBER OF PROCESSED RECORDS SORTED = 93

The list of defined organs is as follows (A- is ACUTE and L- is LIFETIME) :

- A-SKIN
- A-RED MARR
- A-LUNGS
- A-THYROIDH
- A-STOMACH
- A-LOWER LI
- L-EDEMBODY
- L-RED MARR
- L-BONE SUR
- L-BREAST
- L-LUNGS
- L-THYROID
- L-LOWER LI
- L-BLAD WAL
- L-LIVER
- L-THYROIDH

Am using a DOSFAC/DOSFAC2/IDCF2 dose factor file



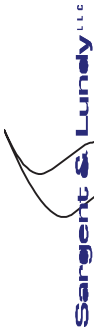
Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

READING FROM A DOSE CONVERSION FILE WITH THE FOLLOWING HEADER:
 MACCS File DOSDATA.INP: Changed by D. CHANIN25-JUN-92, 09:53:47
 Seven new organs added with MACCS Version 1.5.11.1

USING THE FOLLOWING SITE DATA FILE:

MACCS2 SITE FILE FOR PSEG ESPA
 Originator: G. Teagarden (7/14/2008) - Population Updated by S&L 10/2009

10 SPATIAL INTERVALS									
16 WIND DIRECTIONS									
7 CROP CATEGORIES									
4 WATER PATHWAY ISOTOPES									
2 WATERSHEDS									
63 ECONOMIC REGIONS									
SPATIAL DISTANCES									
1.6093	3.2187	4.8280	6.4374	8.0467	16.0935	32.1869	48.2804		
64.3739	80.4674								
POPULATION									
0.	0.	0.	0.	170.	362.	200986.	177866.		
448847.	363839.	5.	9.	50.	8729.	27634.	187239.		
0.	0.								
951522.	1053252.	2.	9.	67.	5174.	14923.	171366.		
0.	0.								
696849.	709835.	19.	50.	312.	1875.	7485.	79517.		
0.	0.								
168204.	78672.	14.	47.	42.	1631.	37292.	107168.		
0.	0.								
41884.	87062.	0.	0.	4.	539.	28321.	34813.		
0.	0.								
14908.	28408.	0.	0.	0.	9.	135.	895.		
0.	0.								
56.	47396.	0.	0.	0.	10.	256.	2592.		
0.	0.								



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-56 of 1.1-373

Client	PSEG Nuclear Development		Safety Related	X	Non-Safety Related	Prepared by	Date
Project	PSEG ESPA					Reviewed by	Date
Proj. No	12380-001		Equip. No.			Approved by	Date

2693.	19048.	0.	0.	5.	190.	23209.	136055.
0.	0.	0.	0.	0.	0.	0.	0.
62733.	54529.	0.	6.	9.	828.	33333.	26456.
0.	0.	0.	0.	0.	0.	0.	0.
26232.	39908.	2.	9.	11.	2398.	6341.	12703.
0.	0.	0.	0.	0.	0.	0.	0.
14398.	23676.	2.	22.	208.	5766.	8588.	6352.
0.	0.	0.	0.	0.	0.	0.	0.
18349.	32002.	3.	181.	436.	19211.	15582.	15301.
0.	0.	0.	0.	0.	0.	0.	0.
71710.	242510.	70.	220.	373.	5284.	78925.	106793.
0.	0.	0.	0.	0.	0.	0.	0.
90311.	37500.	0.	164.	227.	3551.	165975.	93291.
0.	0.	0.	0.	0.	0.	0.	0.
74425.	67892.	0.	118.	37.	2432.	179067.	163291.
0.	0.	0.	0.	0.	0.	0.	0.
220746.	138597.	0.	0.	0.	0.	0.	0.

LAND FRACTION

1.00	0.95	0.30	0.25	0.40	0.75	0.92	0.99	1.00
1.00	1.00	0.93	0.97	1.00	0.95	0.85	0.95	0.99
1.00	1.00	0.99	0.96	0.95	0.99	0.99	0.98	0.98
1.00	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00
0.95	0.95	0.97	1.00	1.00	1.00	0.99	1.00	0.99
0.03	0.25	0.50	0.65	0.75	1.00	0.98	0.92	0.95
0.01	0.00	0.00	0.00	0.00	0.33	0.35	0.03	0.40
0.01	0.00	0.00	0.00	0.00	0.03	0.50	0.35	0.40
0.01	0.00	0.03	0.45	0.60	0.97	0.99	0.99	0.99
0.01	0.00	0.45	0.97	0.92	1.00	1.00	1.00	0.99
0.01	0.00	0.50	0.92	0.95	0.98	1.00	0.98	0.75
0.01	0.00	0.45	0.92	0.92	0.99	0.97	0.93	0.75
0.01	0.00	0.15	0.92	0.92	0.99	0.93	0.40	0.80
0.01	0.00	0.00	0.70	0.97	0.99	0.93	0.90	0.90
0.15	0.00	0.01	0.25	0.85	0.99	1.00	1.00	0.99
0.95	0.30	0.01	0.10	0.35	0.75	0.90	1.00	0.99

REGION INDEX



Calcs. For **ENVIRONMENTAL CONSEQUENCE**
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.1-57 of 1.1-373

Safety Related		Non-Safety Related	
X			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
		Prepared by	Date
		Reviewed by	Date
		Approved by	Date

1 2 2 2 2 2 2 4 5 6
 1 2 2 2 2 2 7 8 9
 1 2 2 2 210111213
 1 2 2 21415161718
 1 2 2 21920202122
 1 2 2 22320202422
 1 2 3 32626262627
 1 3 3 32826262930
 1 3 3 33132333435
 1 3 3 3336373839
 1 3 3 3340414243
 1 3 3 3344454647
 1 3 3 3348495051
 1 2 3 3352535455
 1 2 3 333565758
 1 2 2 235960616263

WATERSHED INDEX

1 1 2 2 1 1 1 1 1
 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1
 2 2 1 1 1 1 1 1 1
 2 2 2 2 2 2 2 2 1
 2 2 2 2 2 1 2 1 1
 2 2 2 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1
 1 2 2 2 1 1 1 1 1

CROP SEASON AND SHARE
 1 PASTURE

90. 270. 0.4100



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

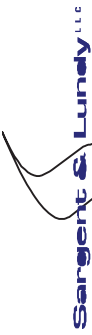
Calc No. 2009-11222
 Rev. 2 Date
 Page 1.1-58 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related		Prepared by	Date
2 STORED FORAGE	150.	240.	0.1300			
3 GRAINS	150.	240.	0.2100			
4 GRN LEAFY VEGETABLES	150.	240.	0.0020			
5 OTHER FOOD CROPS	150.	240.	0.0040			
6 LEGUMES AND SEEDS	150.	240.	0.1500			
7 ROOTS AND TUBERS	150.	240.	0.0030			
WATERSHED DEFINITION -- INITIAL AND ANNUAL WASHOFF AND INGESTION FACTORS						
1 Sr-89			5.00E-06	0.0		
2 Sr-90			5.00E-06	0.0		
3 Cs-134			5.00E-06	0.0		
4 Cs-137			5.00E-06	0.0		

REGIONAL ECONOMIC DATA

01 EXCLUSION	0.45	0.090	1861.3	13673.7	235830.7
02 SALEM	0.45	0.090	1861.3	13673.7	235830.7
03 N CASTLE	0.26	0.079	0948.0	19736.6	303569.3
04 N-20	0.20	0.037	2157.6	20444.1	277602.8
05 N-30	0.05	0.017	1958.8	18162.9	307006.4
06 N-40	0.13	0.100	1964.7	26183.0	351488.1
07 NNE-20	0.25	0.036	3144.9	26457.8	247747.7
08 NNE-30	0.12	0.013	2768.2	26733.3	250181.2
09 NNE-40	0.11	0.026	1981.1	22799.4	265861.5
10 NE-10	0.44	0.086	1981.3	13740.5	233949.1
11 NE-20	0.32	0.056	2672.0	21747.8	243357.2
12 NE-30	0.16	0.016	3403.4	29136.5	253768.9
13 NE-40	0.15	0.027	3187.8	23824.1	271205.3
14 ENE-5	0.43	0.083	2101.4	13807.3	232067.4
15 ENE-10	0.25	0.020	4021.7	14876.9	201961.4
16 ENE-20	0.29	0.035	3504.3	16494.4	215132.8
17 ENE-30	0.13	0.007	5595.6	19080.4	237336.0
18 ENE-40	0.09	0.003	6164.9	18356.6	245615.2
19 E-5	0.30	0.036	3541.6	14609.5	209487.9
20 CUMBERLND	0.23	0.012	4261.8	15010.6	198198.1
21 E-30	0.17	0.007	4389.2	16606.7	223788.3
22 E-40	0.07	0.000	4218.1	19155.6	265936.7
23 ESE-5	0.32	0.044	3301.6	14475.8	213251.2



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page 1.1-59 of 1.1-373

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

24 ESE-30	0.19	0.009	3888.5	16201.6	218896.0		
25 CAPE_MAY	0.06	0.000	2768.8	19774.4	280989.8		
26 KENT_DE	0.49	0.088	1714.9	10388.2	200707.0		
27 SE-40	0.43	0.014	3906.0	13360.2	224540.9		
28 SES-5	0.38	0.084	1331.5	15062.4	252138.1		
29 SES-30	0.49	0.078	2062.6	10727.1	203341.3		
30 SES-40	0.47	0.023	3800.6	12421.5	216512.7		
31 S-5	0.27	0.079	0986.4	19269.2	298426.2		
32 S-10	0.46	0.087	1599.9	11790.5	216136.3		
33 S-20	0.50	0.082	1767.9	10159.8	199201.7		
34 S-30	0.52	0.063	1926.8	09474.5	194685.8		
35 S-40	0.53	0.036	2423.0	09700.5	203968.5		
36 SWS-10	0.40	0.103	1231.4	15426.4	272836.0		
37 SWS-20	0.63	0.085	1270.4	09569.8	270201.8		
38 SWS-30	0.63	0.064	1347.3	09240.4	264682.3		
39 SWS-40	0.63	0.064	1166.0	10030.4	290197.2		
40 SW-10	0.43	0.125	1256.5	15562.8	286509.2		
41 SW-20	0.65	0.171	1368.6	09985.2	279459.4		
42 SW-30	0.66	0.167	1334.9	09820.8	280989.8		
43 SW-40	0.64	0.187	1402.0	10172.6	279384.1		
44 WSW-10	0.32	0.089	1760.8	18256.9	257908.5		
45 WSW-20	0.39	0.123	1997.0	16311.0	242353.7		
46 WSW-30	0.33	0.313	0853.2	14611.5	278480.9		
47 WSW-40	0.23	0.201	1473.6	17532.4	294788.4		
48 W-10	0.31	0.088	1635.7	18484.6	264933.2		
49 CECIL	0.35	0.095	2198.4	17460.1	233321.9		
50 W-30	0.31	0.245	1284.0	15950.9	262675.3		
51 W-40	0.33	0.298	1003.5	15264.2	269449.1		
52 WNW-10	0.28	0.083	1260.6	19167.5	286007.4		
53 WNW-20	0.35	0.104	3199.1	21168.5	276223.0		
54 WNW-30	0.45	0.182	4643.1	25326.0	304823.7		
55 WNW-40	0.66	0.316	4437.0	22199.0	233321.9		
56 NW-20	0.32	0.107	3724.6	25741.9	345818.1		
57 NW-30	0.36	0.132	5511.6	29619.0	372035.5		
58 NW-40	0.52	0.230	5161.0	26449.5	304823.7		



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-60 of 1.1-373

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

59	NWN-5	0.41	0.088	1678.7	14886.2	249378.4
60	NWN-10	0.31	0.082	1176.3	18220.9	286634.7
61	NWN-20	0.23	0.072	2025.2	21198.8	320127.6
62	NWN-30	0.30	0.107	4966.1	27892.5	366917.4
63	NWN-40	0.33	0.128	5161.7	29958.4	338693.0

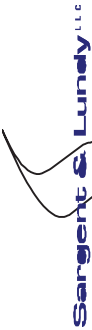
END
*23456789012345678901234567890123456789012345678901234567890 - alignment

POPULATION

```

***** BEGINNING OF CHANGE CASE 1 USER INPUT *****
*
* *****
* EMERGENCY RESPONSE SCENARIO NUMBER 2
* *****
* *****
* EVACUATION ZONE DATA BLOCK
* *****
*
* SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
*
94 EZEANAM2001 'NO EVACUATION'
***** RECORD NUMBER 94 REPLACES RECORD NUMBER 34 *****
*
* WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO
* 5% OF PEOPLE RELOCATED (NO EVACUATION)
*
95 EZWTFRAC001 0.05
***** RECORD NUMBER 95 REPLACES RECORD NUMBER 36 *****
*
* LAST RING IN THE MOVEMENT ZONE
* A ZERO TURNS OFF THE EVACUATION MODEL
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

96 EZIASMOV001 0
 ***** RECORD NUMBER 96 REPLACES RECORD NUMBER 37 *****
 ***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 1 USER INPUT *****
 USER INPUT PROCESSING SUMMARY - CHANGE CASE 1
 NUMBER OF RECORDS CHANGED = 3
 NUMBER OF RECORDS ADDED = 0

NO EVACUATION REQUESTED

***** WARNING -- THE FOLLOWING RECORDS WERE NEVER ACCESSED *****

DESCRIPTIVE TITLE DESCRIBING THIS "EARLY" INPUT FILE

USER INPUT IS READ FROM UNIT 26
 RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.
 THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
 THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

RECORD
 NUMBER RECORD

 * FILE NAME E.3.INP *****
 *
 * Sargent & Lundy (10/2009)
 *

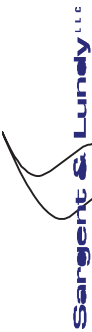


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

* DESCRIPTIVE TITLE DESCRIBING THIS "CHRONC" INPUT FILE
*
1 CHCHNAME001 'GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS '
*
* ECONOMIC DATA USED: 2009 CPI, 2002 CENSUS OF AGRICULTURE, 2005 BEA & BLS DATA
*
*****
* EMERGENCY RESPONSE COST DATA
*****
* EMERGENCY PHASE - DAILY COST FOR PERSON RELOCATED ($/PERSON-DAY)
*
2 CHEVACST001 53.19 * 27.00 * 1.97
*
* INTERMEDIATE PHASE - DAILY COST FOR PERSON RELOCATED ($/PERSON-DAY)
*
3 CHRELCST001 53.19 * 27.00 * 1.97
*
*****
* LONG TERM PROTECTIVE ACTION DATA
*****
*
4 DUR_INTPHAS 0.0 *(in seconds) (no intermediate phase)
*
* LONG-TERM PHASE DOSE PROJECTION PERIOD, THE DURATION OF THE EXPOSURE
* PERIOD OVER WHICH THE LONG-TERM DOSE CRITERION IS EVALUATED (SECONDS)
*
5 CHTMPACT001 1.58E8 * seconds (5 YEARS)
*
* DOSE CRITERION FOR INTERMEDIATE PHASE RELOCATION (Sv) (YEAR 0-0.5)
*
6 CHDSCRTI001 1.0E5 (NO INTERMEDIATE PHASE RELOCATION)
*
* DOSE CRITERION FOR LONG-TERM PHASE RELOCATION (Sv) * (YEAR 0.5-5)
*

```

**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

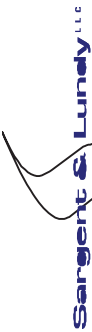
Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-63	of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

7 CHDSCRLT001 0.03 (3 REM)
*
* CRITICAL ORGAN NAME FOR LONG-TERM ACTIONS
*
8 CHCRTOCR001 'L-EDEWBODY'
*
* LONG TERM EXPOSURE PERIOD
*
9 CHEXPTIM001 1.58E9 * (50 YEARS PER EPA STANDARD DEFAULT EXPONENTIAL FACTORS)
*
*****
* DECONTAMINATION PLAN DATA BLOCK
*****
*
* NUMBER OF LEVELS OF DECONTAMINATION
*
10 CHLVLDEC001 2
*
* DECONTAMINATION TIMES CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
* (SECONDS)
*
11 CHTIMDEC001 5.184E6 1.0368E7 (60, 120 DAYS)
*
* DOSE REDUCTION FACTORS CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
*
12 CHDSRFACT001 3. 15.
*
* COST OF FARM DECONTAMINATION PER FARMLAND UNIT AREA (DOLLARS/HECTARE)
* FOR THE VARIOUS LEVELS OF DECONTAMINATION
*
13 CHCDFRM0001 1109. 2463.
*
* COST OF NONFARM DECONTAMINATION PER RESIDENT PERSON (DOLLARS/PERSON)
* FOR THE VARIOUS LEVELS OF DECONTAMINATION
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-64 of 1.1-373

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
Prepared by		Date
Reviewed by		Date
Approved by		Date

14 CHCDNFRM001 5910. 15760.
 * FRACTION OF FARMLAND DECONTAMINATION COST DUE TO LABOR
 * FOR THE VARIOUS DECONTAMINATION LEVELS
 15 CHFRFDL0001 .3 .35
 * FRACTION OF NON-FARM DECONTAMINATION COST DUE TO LABOR
 * FOR THE VARIOUS DECONTAMINATION LEVELS
 16 CHFRNFDL001 .7 .5
 * FRACTION OF TIME WORKERS IN FARM AREAS SPEND IN CONTAMINATED AREAS
 * FOR THE VARIOUS DECONTAMINATION LEVELS
 17 CHTFWKF0001 .10 .33
 * FRACTION OF TIME WORKERS IN NON-FARM AREAS SPEND IN CONTAMINATED AREAS
 * FOR THE VARIOUS DECONTAMINATION LEVELS
 18 CHTFWKNF001 .33 .33
 * AVERAGE COST OF DECONTAMINATION LABOR (DOLLARS/MAN-YEAR)
 19 CHDLBCST001 68950.
 * INTERDICTION COST DATA BLOCK
 * DEPRECIATION (DETERIORATION) RATE DURING INTERDICTION PERIOD (PER YEAR)
 20 CHDPRATE001 .20 * (NUREG/CR-4551 PART 7 TABLE 5.1)
 * INVESTMENT INCOME RETURN (DISCOUNT RATE) DURING INTERDICTION PERIOD (PER YEAR)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* THIS VALUE SHOULD BE DERIVED AS A REAL RETURN RATE ADJUSTED FOR INFLATION.

21 CHDSRATE001 .07 *(NEI 05-01)

* POPULATION RELOCATION COST (DOLLARS/PERSON)

22 CHPOPCST001 9850.

* GROUNDSHINE WEATHERING DEFINITION DATA BLOCK

* NUMBER OF TERMS IN THE GROUNDSHINE WEATHERING RELATIONSHIP (EITHER 1 OR 2)

23 CHNGWTRM001 2

* GROUNDSHINE WEATHERING COEFFICIENTS

* CHGWCOEF001 0.5 0.5

* HALF LIVES CORRESPONDING TO THE GROUNDSHINE WEATHERING COEFFICIENTS (S)

25 CHTGWHLF001 1.6E7 2.8E9

* RESUSPENSION WEATHERING DEFINITION DATA BLOCK

* NUMBER OF TERMS IN THE RESUSPENSION WEATHERING RELATIONSHIP

26 CHNRWTRM001 3

* RESUSPENSION CONCENTRATION COEFFICIENTS (/ METER)

* RELATIONSHIP BETWEEN GROUND CONCENTRATION AND INSTANTANEOUS AIR CONC.

*



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2 Date

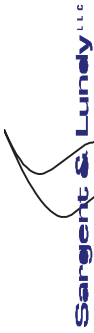
Page 1.1-66 of 1.1-373

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

```

27  CHRWCOEF001  1.0E-5  1.0E-7  1.0E-9  * (SAMPLE PROBLEM A, JON HELTON)
*
*  HALF-LIVES CORRESPONDING TO THE RESUSPENSION CONCENTRATION COEFFICIENTS (S)
*
28  CHTRWHLF001  1.6E7   1.6E8   1.6E9  * (6 MONTHS, 5 YEARS, 50 YEARS)
*
*****
*  REGIONAL CHARACTERISTICS DATA
*****
*
*  FRACTION OF AREA THAT IS LAND IN THE REGION
*
29  CHFRACLD001  0.95  * (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
*
*  FRACTION OF LAND DEVOTED TO FARMING IN THE REGION
*
30  CHFRCFRM001  0.382 * (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
*
*  AVERAGE VALUE OF ANNUAL FARM PRODUCTION IN THE REGION (DOLLARS/HECTARE)
*  (CASH RECEIPTS FROM FARMING PLUS VALUE OF HOME CONSUMPTION) / (LAND IN FARMS)
*
31  CHFRMPRD001  371.0 * (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
*
*  FRACTION OF FARM PRODUCTION RESULTING FROM DAIRY PRODUCTION IN THE REGION
*  (VALUE OF MILK PRODUCED) / (CASH RECEIPTS FROM FARMING PLUS HOME CONSUMPTION)
*
32  CHDPFRCT001  0.198 * (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
*
*  VALUE OF FARM WEALTH (DOLLARS/HECTARE)
*  (AVERAGE VALUE PER HECTARE OF FARM LAND AND BUILDINGS TO 50 MILES)
*
33  CHVALWF0001  16636.
*
*  FRACTION OF FARM WEALTH IN IMPROVEMENTS FOR THE REGION
*

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No.	2009-11222
Rev.	2
Date	
Page	1.1-67 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

34 CHFRFIM001 0.25 * SURRY & PEACH BOTTOM (NUREG/CR-4551 PART 7, TABLE 5.4)
*
* NON-FARM WEALTH, PROPERTY AND IMPROVEMENTS FOR THE REGION (DOLLARS/PERSON)
* THE VALUE OF ALL RESIDENTIAL, BUSINESS, AND PUBLIC ASSETS WHICH WOULD BE
* LOST IN THE EVENT OF PERMANENT INTERDICTION (CONDEMNATION) OF THE AREA
*
35 CHVALWNF001 275924.
*
* FRACTION OF NON-FARM WEALTH IN IMPROVEMENTS FOR THE REGION
*
36 CHFRNFIM001 0.8
*
*****
* FOOD INGESTION MODEL
*****
*NEW COMIDA2-BASED FOOD INGESTION MODEL
37 CHFDPATH001 'NEW'
*
* FILE PATH OF THE COMIDA2 FILE
*
38 BIN_FILE001 'C:\MACCS2\SAMP_A.BIN'
*
* THE MAXIMUM ALLOWABLE FOOD INGESTION DOSE FROM MILK CROPS
*
* EFFECTIVE THYROID (SV)
39 DOSEMILK001 0.0025 0.025
40 DOSEOTHR001 0.0025 0.025
*
* EFFECTIVE THYROID (SV)
41 DOSELONG001 0.005 0.050
*
* NUMBER OF NUCLIDES IN THE WATER INGESTION PATHWAY MODEL
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

42 CHNUMWPI001      4
*
* TABLE OF NUCLIDE DEFINITIONS IN THE WATER INGESTION PATHWAY MODEL
*
* IF A SITE DATA FILE IS DEFINED, THE DATA DEFINING THE WATERSHED INGESTION
* FACTOR IS SUPERSEDED BY THE CORRESPONDING DATA IN THE SITE DATA FILE
*
*
* INITIAL ANNUAL INGESTION FACTOR
* WATER WASHOFF WASHOFF ( (Bq INGESTED) /
* NUCLIDE FRACTION RATE (Bq IN WATER) )
*
* NAMWPI WSHRTA WINGF
* CHWTRISO001 Sr-89 0.01 0.004 5.0E-6
* CHWTRISO002 Sr-90 0.01 0.004 5.0E-6
* CHWTRISO003 Cs-134 0.005 0.001 5.0E-6
* CHWTRISO004 Cs-137 0.005 0.001 5.0E-6
*
*****
* SPECIAL OPTIONS DATA BLOCK
*****
*
* DETAILED PRINT OPTION CONTROL SWITCHES, LOOK AT THE CODE BEFORE TURNING ON!!
*
* KSWDSC
*
47 CHKSWTCH001      0
*
*****
* POPULATION DOSE RESULTS
*****
* DEFINE THE TYPE 9 RESULTS
* LONG-TERM POPULATION DOSE IN A GIVEN REGION BROKEN DOWN BY THE 12 PATHWAYS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

48 TYPE9NUMBER 2 (UP TO 10 ALLOWED)
*
* ORGNAM INNER OUTER
*
49 TYPE9OUT001 'L-EDEWBODY' 1 6 (0-10 MILES)
50 TYPE9OUT002 'L-EDEWBODY' 1 10 (0-50 MILES)
*
*****
* ECONOMIC COST RESULTS
*****
* ECONOMIC COST RESULTS IN A REGION BROKEN DOWN BY 12 TYPES OF COSTS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
*
51 TYP10NUMBER 1 * (UP TO 10 ALLOWED)
*
* INNER OUTER
*
52 TYP10OUT001 1 10 *(0-50 MILES)
*
*****
* ACTION DISTANCE RESULTS
*****
*
* DEFINE A FLAG THAT CONTROLS THE PRODUCTION OF THE ACTION DISTANCE RESULTS
*
* SPECIFYING A VALUE OF .TRUE. TURNS ON ALL 8 OF THE ACTION DISTANCE RESULTS,
* A VALUE OF .FALSE. WILL ELIMINATE THE ACTION DISTANCE RESULTS FROM THE OUTPUT.
*
53 TYP11FLAG11 .FALSE.
*
*****
* IMPACTED AREA/POPULATION RESULTS
*****

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-70	of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

* IMPACTED AREA/POPULATION RESULTS IN A REGION BROKEN DOWN BY 6 TYPES OF IMPACTS

* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
 * FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 8

54 TYP12NUMBER 1 (UP TO 10 ALLOWED)

* INNER OUTER

55 TYP12OUT001 1 10 (0-50 MILES)

* MAXIMAL ANNUAL FOOD INGESTION DOSE TO AN INDIVIDUAL

* MAXIMAL ANNUAL FOOD INGESTION DOSE TO AN INDIVIDUAL

* This result is calculated after accounting for temporary or permanent interdiction. It is only available for the "new" food model.

* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED

56 TYP13NUMBER 0 (UP TO 10 ALLOWED)

***** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT *****

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ	= 314
NUMBER OF BLANK OR COMMENT RECORDS READ	= 257
NUMBER OF TERMINATOR RECORDS	= 1



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.1-71	of 1.1-373
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

NUMBER OF RECORDS PROCESSED = 56
 NUMBER OF PROCESSED RECORDS DUPLICATED = 0
 NUMBER OF PROCESSED RECORDS SORTED = 56

COMIDA2 binary file header =
 COMIDA2 01/14/2004 13:06:02 Version 1.11.1, 01/12/2004

COMIDA2 descriptive title =
 MACCS File DOSDATA.INP: Changed by D. CHANIN25-JUN-92, 09:53:47

Seven new organs added with MACCS Version 1.5.11.1

A SITE DATA FILE IS BEING USED FOR BOTH "EARLY" AND "CHRONC"

7 CANCER EFFECTS ARE DEFINED IN THE MODEL.

INDEX	CANCER EFFECT	ORGAN	ALPHA	BETA	CFRISK	CIRISK
1	LEUKEMIA	L-RED MARR	1.000E+00	0.000E+00	9.700E-03	0.000E+00
2	BONE	L-BONE SUR	1.000E+00	0.000E+00	1.200E-04	0.000E+00
3	BREAST	L-BREAST	1.000E+00	0.000E+00	5.400E-03	1.700E-02
4	LUNG	L-LUNGS	1.000E+00	0.000E+00	1.550E-02	0.000E+00
5	THYROID	L-THYROIDH	1.000E+00	0.000E+00	7.200E-04	7.200E-03
6	GI	L-LOWER LI	1.000E+00	0.000E+00	3.360E-02	0.000E+00
7	OTHER	L-EDEWBODY	1.000E+00	0.000E+00	2.760E-02	0.000E+00

TIME OF HOTSPOT RELOCATION IS 4.3200E+04.
 TIME OF NORMAL RETURN IS 8.640E+04 AND THE EMERGENCY PHASE ENDS AT 6.048E+05.

GROUNDSHINE SHIELDING FACTOR = 0.330
 RESUSPENSION PROTECTION FACTOR = 0.410



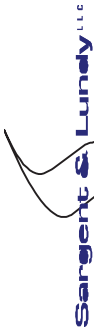
Calcs. For ENVIRONMENTAL CONSEQUENCE		2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.1-72 of 1.1-373	
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

BREATHING RATE (CUBIC M/S) = 2.660E-04

DISPERSION MODEL FLAG IS 2

WINDROSE PROBABILITIES BY WIND DIRECTION AND MET BIN NUMBER

BIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	0.1923	0.0000	0.2692	0.0385	0.1154	0.0769	0.0000	0.0385	0.0385	0.0000	0.0000	0.0000	0.0385	0.0769	0.0000	0.1154
2	0.0050	0.0050	0.0274	0.0498	0.0871	0.0920	0.2438	0.1542	0.0622	0.0398	0.0199	0.0025	0.0149	0.0149	0.0995	0.0821
3	0.0000	0.0303	0.0606	0.0000	0.0000	0.0606	0.0303	0.0909	0.0909	0.2121	0.1212	0.0909	0.1212	0.0303	0.0000	0.0606
4	0.0734	0.0765	0.0550	0.0489	0.0550	0.0673	0.0642	0.0765	0.0765	0.0887	0.0703	0.0642	0.0398	0.0306	0.0336	0.0795
5	0.0852	0.0762	0.1181	0.0658	0.0688	0.0553	0.0553	0.0688	0.0703	0.0538	0.0493	0.0538	0.0463	0.0209	0.0404	0.0717
6	0.0758	0.0735	0.0719	0.0579	0.0774	0.0618	0.0970	0.0774	0.0500	0.0970	0.0868	0.0219	0.0039	0.0172	0.0508	0.0797
7	0.0821	0.0709	0.0311	0.0311	0.0684	0.1356	0.1791	0.0585	0.0659	0.0435	0.0249	0.0050	0.0000	0.0112	0.1119	0.0808
8	0.0144	0.0072	0.0108	0.0072	0.0325	0.2022	0.2455	0.0975	0.0144	0.0108	0.0072	0.0000	0.0000	0.0072	0.2599	0.0830
9	0.0326	0.0543	0.0217	0.0109	0.0870	0.0870	0.0761	0.0435	0.0870	0.1087	0.0761	0.1087	0.0761	0.0543	0.0326	0.0435
10	0.0352	0.0462	0.0527	0.0637	0.0593	0.0571	0.0725	0.0637	0.0593	0.0923	0.0879	0.0901	0.1011	0.0308	0.0330	0.0549
11	0.0400	0.0471	0.0986	0.0857	0.0657	0.0714	0.1100	0.0786	0.0786	0.0729	0.0757	0.0386	0.0200	0.0371	0.0400	0.0400
12	0.0637	0.0922	0.0600	0.0817	0.0735	0.0765	0.1319	0.0802	0.0967	0.0427	0.0195	0.0060	0.0022	0.0210	0.1042	0.0480
13	0.0833	0.0208	0.0625	0.0208	0.0625	0.1042	0.0417	0.0208	0.0208	0.1250	0.0417	0.1250	0.0417	0.1250	0.1042	0.0000
14	0.0549	0.0506	0.0506	0.0506	0.0506	0.0380	0.0253	0.0295	0.0928	0.1013	0.0970	0.0886	0.1055	0.0464	0.0675	0.0506
15	0.0224	0.0224	0.0705	0.0449	0.0288	0.0353	0.0705	0.0737	0.1154	0.0737	0.1186	0.0321	0.0064	0.0609	0.1763	0.0481
16	0.0180	0.0420	0.0571	0.0841	0.0270	0.0180	0.0661	0.0631	0.0661	0.0571	0.0330	0.0030	0.0000	0.0030	0.3964	0.0661
17	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
18	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
19	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
20	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
21	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
22	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
23	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
24	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
25	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
26	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
27	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
28	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
29	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related		Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	
Project PSEG ESPA		Reviewed by	
Proj. No 12380-001		Approved by	
Equip. No.		Date	

30	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
31	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
32	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
33	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
34	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
35	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
36	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
37	0.0561	0.0592	0.0619	0.0568	0.0581	0.0672	0.1015	0.0693	0.0659	0.0687	0.0674	0.0459	0.0274	0.0283	0.0989	0.0675
38	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
39	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
40	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
41	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Processing a Site Data File with Header: MACCS2 SITE FILE FOR PSEG ESPA
 Originator: G. Teagarden (7/14/2008) - Population Updated by S&L 10/2009



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.1-74 of 1.1-373
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
		Prepared by	
		Reviewed by	
		Approved by	

THIS PROGRAM CURRENTLY ALLOWS THE GENERATION OF UP TO 394 RESULTS

YOU HAVE REQUESTED 16 RESULTS FROM "EARLY" COMPOSED OF:

- 5 RESULTS OF TYPE 1
- 0 RESULTS OF TYPE 2
- 2 RESULTS OF TYPE 3
- 0 RESULTS OF TYPE 4
- 2 RESULTS OF TYPE 5
- 0 RESULTS OF TYPE 6
- 0 RESULTS OF TYPE 7
- 6 RESULTS OF TYPE 8
- 1 RESULTS OF TYPE A
- 0 RESULTS OF TYPE B

YOU HAVE REQUESTED 55 RESULTS FROM "CHRONC" COMPOSED OF:

- 34 RESULTS OF TYPE 9
- 13 RESULTS OF TYPE 10
- 0 RESULTS OF TYPE 11
- 8 RESULTS OF TYPE 12
- 0 RESULTS OF TYPE 13

TRIAL	DAY	HOUR	BIN	PRBMET
1	152	7	18	4.00E-04
For Julian Day 152, selecting COMIDA2 results # 4 of 9				
2	152	13	24	1.14E-04
For Julian Day 152, selecting COMIDA2 results # 4 of 9				
3	152	18	21	2.40E-03
For Julian Day 152, selecting COMIDA2 results # 4 of 9				
4	153	4	3	3.14E-04
For Julian Day 153, selecting COMIDA2 results # 4 of 9				
5	153	7	26	2.95E-04
For Julian Day 153, selecting COMIDA2 results # 4 of 9				



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-75 of 1.1-373

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

6	153	9	26	2.95E-04
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9	
7	153	12	25	3.04E-04
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9	
8	153	14	25	3.04E-04
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9	
9	154	24	9	8.75E-04
For Julian Day 154,	selecting	COMIDA2	results # 4 of 9	
10	155	17	6	1.22E-02
For Julian Day 155,	selecting	COMIDA2	results # 4 of 9	
11	156	20	26	2.95E-04
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9	
12	156	23	26	2.95E-04
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9	
13	157	2	25	3.04E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
14	157	3	24	1.14E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
15	157	4	22	7.23E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
16	157	17	27	2.76E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
17	157	18	27	2.76E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
18	157	19	22	7.23E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
19	158	17	4	3.11E-03
For Julian Day 158,	selecting	COMIDA2	results # 4 of 9	
20	159	7	3	3.14E-04
For Julian Day 159,	selecting	COMIDA2	results # 4 of 9	
21	159	11	1	2.47E-04
For Julian Day 159,	selecting	COMIDA2	results # 4 of 9	
22	160	7	10	4.33E-03
For Julian Day 160,	selecting	COMIDA2	results # 4 of 9	
23	160	14	12	1.27E-02



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-76	of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 160, selecting COMIDA2 results # 4 of 9
 24 162 12 36 2.19E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 25 162 14 36 2.19E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 26 162 15 35 2.47E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 27 162 17 34 1.14E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 28 162 18 32 3.61E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 29 162 20 19 9.51E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 30 162 24 20 3.17E-03

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 31 163 14 17 3.45E-03

For Julian Day 163, selecting COMIDA2 results # 4 of 9
 32 163 19 18 4.00E-04

For Julian Day 163, selecting COMIDA2 results # 4 of 9
 33 166 10 7 7.65E-03

For Julian Day 166, selecting COMIDA2 results # 4 of 9
 34 166 16 36 2.19E-04

For Julian Day 166, selecting COMIDA2 results # 4 of 9
 35 166 18 36 2.19E-04

For Julian Day 166, selecting COMIDA2 results # 4 of 9
 36 166 19 35 2.47E-04

For Julian Day 166, selecting COMIDA2 results # 4 of 9
 37 167 12 5 6.36E-03

For Julian Day 167, selecting COMIDA2 results # 5 of 9
 38 167 21 15 2.97E-03

For Julian Day 167, selecting COMIDA2 results # 5 of 9
 39 168 4 11 6.66E-03

For Julian Day 168, selecting COMIDA2 results # 5 of 9
 40 169 7 31 2.85E-04

For Julian Day 169, selecting COMIDA2 results # 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page 1.1-77 of 1.1-373

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

41	169	10	31	2.85E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9	
42	169	11	31	2.85E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9	
43	169	13	30	2.57E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9	
44	169	15	29	1.14E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9	
45	169	16	28	1.14E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9	
46	169	18	30	2.57E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9	
47	169	20	29	1.14E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9	
48	169	21	27	2.76E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9	
49	173	16	8	2.64E-03
For Julian Day 173,	selecting	COMIDA2	results # 5 of 9	
50	174	16	25	3.04E-04
For Julian Day 174,	selecting	COMIDA2	results # 5 of 9	

TRIAL	DAY	HOUR	BIN	PRBMET
51	174	17	24	1.14E-04
For Julian Day 174,	selecting	COMIDA2	results # 5 of 9	
52	174	18	23	1.14E-04
For Julian Day 174,	selecting	COMIDA2	results # 5 of 9	
53	177	11	36	2.19E-04
For Julian Day 177,	selecting	COMIDA2	results # 5 of 9	
54	177	13	35	2.47E-04
For Julian Day 177,	selecting	COMIDA2	results # 5 of 9	
55	177	14	35	2.47E-04
For Julian Day 177,	selecting	COMIDA2	results # 5 of 9	
56	180	21	36	2.19E-04
For Julian Day 180,	selecting	COMIDA2	results # 5 of 9	



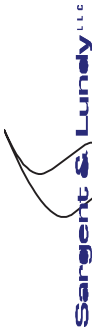
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-78	of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

57	180	23	35	2.47E-04
For Julian Day 180,	selecting	COMIDA2	results # 5	of 9
58	180	24	34	1.14E-04
For Julian Day 180,	selecting	COMIDA2	results # 5	of 9
59	183	8	5	6.36E-03
For Julian Day 183,	selecting	COMIDA2	results # 5	of 9
60	183	13	26	2.95E-04
For Julian Day 183,	selecting	COMIDA2	results # 5	of 9
61	183	15	25	3.04E-04
For Julian Day 183,	selecting	COMIDA2	results # 5	of 9
62	183	16	22	7.23E-04
For Julian Day 183,	selecting	COMIDA2	results # 5	of 9
63	183	17	32	3.61E-04
For Julian Day 183,	selecting	COMIDA2	results # 5	of 9
64	185	15	4	3.11E-03
For Julian Day 185,	selecting	COMIDA2	results # 5	of 9
65	186	11	2	3.82E-03
For Julian Day 186,	selecting	COMIDA2	results # 5	of 9
66	186	15	8	2.64E-03
For Julian Day 186,	selecting	COMIDA2	results # 5	of 9
67	187	2	31	2.85E-04
For Julian Day 187,	selecting	COMIDA2	results # 5	of 9
68	187	3	30	2.57E-04
For Julian Day 187,	selecting	COMIDA2	results # 5	of 9
69	187	4	29	1.14E-04
For Julian Day 187,	selecting	COMIDA2	results # 5	of 9
70	189	2	14	2.25E-03
For Julian Day 189,	selecting	COMIDA2	results # 5	of 9
71	190	12	6	1.22E-02
For Julian Day 190,	selecting	COMIDA2	results # 5	of 9
72	190	22	16	3.17E-03
For Julian Day 190,	selecting	COMIDA2	results # 5	of 9
73	194	5	36	2.19E-04
For Julian Day 194,	selecting	COMIDA2	results # 6	of 9
74	194	8	32	3.61E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-79 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 194, selecting COMIDA2 results # 6 of 9
75 194 14 27 2.76E-04

For Julian Day 194, selecting COMIDA2 results # 6 of 9
76 194 18 32 3.61E-04

For Julian Day 194, selecting COMIDA2 results # 6 of 9
77 196 3 10 4.33E-03

For Julian Day 196, selecting COMIDA2 results # 6 of 9
78 196 15 35 2.47E-04

For Julian Day 196, selecting COMIDA2 results # 6 of 9
79 198 20 11 6.66E-03

For Julian Day 198, selecting COMIDA2 results # 6 of 9
80 200 8 32 3.61E-04

For Julian Day 200, selecting COMIDA2 results # 6 of 9
81 202 24 9 8.75E-04

For Julian Day 202, selecting COMIDA2 results # 6 of 9
82 204 5 13 4.57E-04

For Julian Day 204, selecting COMIDA2 results # 6 of 9
83 204 16 7 7.65E-03

For Julian Day 204, selecting COMIDA2 results # 6 of 9
84 206 18 6 1.22E-02

For Julian Day 206, selecting COMIDA2 results # 6 of 9
85 209 2 5 6.36E-03

For Julian Day 209, selecting COMIDA2 results # 6 of 9
86 209 10 36 2.19E-04

For Julian Day 209, selecting COMIDA2 results # 6 of 9
87 209 13 32 3.61E-04

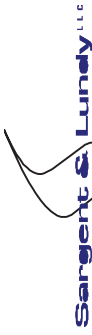
For Julian Day 209, selecting COMIDA2 results # 6 of 9
88 209 24 20 3.17E-03

For Julian Day 209, selecting COMIDA2 results # 6 of 9
89 210 2 19 9.51E-04

For Julian Day 210, selecting COMIDA2 results # 6 of 9
90 210 7 3 3.14E-04

For Julian Day 210, selecting COMIDA2 results # 6 of 9
91 210 10 4 3.11E-03

For Julian Day 210, selecting COMIDA2 results # 6 of 9



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related Non-Safety Related

Page 1.1-80 of 1.1-373

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

92	210	12	4	3.11E-03
For Julian Day 210,	selecting	COMIDA2	results #	6 of 9
93	211	3	10	4.33E-03
For Julian Day 211,	selecting	COMIDA2	results #	6 of 9
94	215	2	9	8.75E-04
For Julian Day 215,	selecting	COMIDA2	results #	6 of 9
95	215	7	3	3.14E-04
For Julian Day 215,	selecting	COMIDA2	results #	6 of 9
96	216	4	3	3.14E-04
For Julian Day 216,	selecting	COMIDA2	results #	6 of 9
97	216	6	9	8.75E-04
For Julian Day 216,	selecting	COMIDA2	results #	6 of 9
98	217	3	11	6.66E-03
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9
99	217	12	31	2.85E-04
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9
100	217	16	30	2.57E-04
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9
TRIAL	DAY	HOUR	BIN	PRBMET
101	217	18	30	2.57E-04
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9
102	217	19	29	1.14E-04
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9
103	217	20	27	2.76E-04
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9
104	218	6	19	9.51E-04
For Julian Day 218,	selecting	COMIDA2	results #	6 of 9
105	218	23	12	1.27E-02
For Julian Day 218,	selecting	COMIDA2	results #	6 of 9
106	223	22	7	7.65E-03
For Julian Day 223,	selecting	COMIDA2	results #	7 of 9
107	224	18	17	3.45E-03
For Julian Day 224,	selecting	COMIDA2	results #	7 of 9

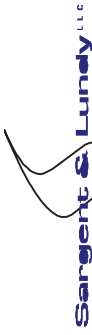


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-81 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

108	226	9	26	2.95E-04			
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9				
109	226	12	24	1.14E-04			
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9				
110	226	14	6	1.22E-02			
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9				
111	226	19	4	3.11E-03			
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9				
112	227	16	18	4.00E-04			
For Julian Day 227,	selecting	COMIDA2	results # 7 of 9				
113	228	3	3	3.14E-04			
For Julian Day 228,	selecting	COMIDA2	results # 7 of 9				
114	228	5	10	4.33E-03			
For Julian Day 228,	selecting	COMIDA2	results # 7 of 9				
115	228	20	21	2.40E-03			
For Julian Day 228,	selecting	COMIDA2	results # 7 of 9				
116	229	6	17	3.45E-03			
For Julian Day 229,	selecting	COMIDA2	results # 7 of 9				
117	230	9	26	2.95E-04			
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9				
118	230	12	26	2.95E-04			
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9				
119	230	15	25	3.04E-04			
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9				
120	230	16	25	3.04E-04			
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9				
121	230	17	24	1.14E-04			
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9				
122	230	18	22	7.23E-04			
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9				
123	230	23	20	3.17E-03			
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9				
124	231	13	36	2.19E-04			
For Julian Day 231,	selecting	COMIDA2	results # 7 of 9				
125	231	14	36	2.19E-04			



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-82 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 231, selecting COMIDA2 results # 7 of 9
 126 231 16 35 2.47E-04
 For Julian Day 231, selecting COMIDA2 results # 7 of 9
 127 231 18 34 1.14E-04
 For Julian Day 231, selecting COMIDA2 results # 7 of 9
 128 234 14 30 2.57E-04
 For Julian Day 234, selecting COMIDA2 results # 7 of 9
 129 235 16 5 6.36E-03
 For Julian Day 235, selecting COMIDA2 results # 7 of 9
 130 236 13 1 2.47E-04
 For Julian Day 236, selecting COMIDA2 results # 7 of 9
 131 238 7 11 6.66E-03
 For Julian Day 238, selecting COMIDA2 results # 7 of 9
 132 243 12 27 2.76E-04
 For Julian Day 243, selecting COMIDA2 results # 7 of 9
 133 243 15 24 1.14E-04
 For Julian Day 243, selecting COMIDA2 results # 7 of 9
 134 243 17 26 2.95E-04
 For Julian Day 243, selecting COMIDA2 results # 7 of 9
 135 243 21 25 3.04E-04
 For Julian Day 243, selecting COMIDA2 results # 7 of 9
 136 243 23 24 1.14E-04
 For Julian Day 243, selecting COMIDA2 results # 7 of 9
 137 245 7 15 2.97E-03
 For Julian Day 245, selecting COMIDA2 results # 7 of 9
 138 248 3 14 2.25E-03
 For Julian Day 248, selecting COMIDA2 results # 7 of 9
 139 250 15 6 1.22E-02
 For Julian Day 250, selecting COMIDA2 results # 7 of 9
 140 251 10 1 2.47E-04
 For Julian Day 251, selecting COMIDA2 results # 7 of 9
 141 253 2 8 2.64E-03
 For Julian Day 253, selecting COMIDA2 results # 7 of 9
 142 253 4 25 3.04E-04
 For Julian Day 253, selecting COMIDA2 results # 7 of 9



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

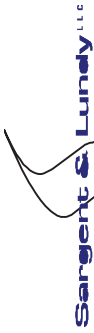
Rev. 2 Date

Safety Related Non-Safety Related

Page 1.1-83 of 1.1-373

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

143	254	4	12	1.27E-02
For Julian Day 254,	selecting	COMIDA2	results # 7 of 9	
144	254	24	14	2.25E-03
For Julian Day 254,	selecting	COMIDA2	results # 7 of 9	
145	255	13	5	6.36E-03
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9	
146	255	14	4	3.11E-03
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9	
147	260	5	3	3.14E-04
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9	
148	260	10	1	2.47E-04
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9	
149	263	14	2	3.82E-03
For Julian Day 263,	selecting	COMIDA2	results # 8 of 9	
150	264	13	5	6.36E-03
For Julian Day 264,	selecting	COMIDA2	results # 8 of 9	
TRIAL	DAY	HOUR	BIN	PRBMET
151	266	7	16	3.17E-03
For Julian Day 266,	selecting	COMIDA2	results # 8 of 9	
152	269	8	9	8.75E-04
For Julian Day 269,	selecting	COMIDA2	results # 8 of 9	
153	269	13	1	2.47E-04
For Julian Day 269,	selecting	COMIDA2	results # 8 of 9	
154	270	21	9	8.75E-04
For Julian Day 270,	selecting	COMIDA2	results # 8 of 9	
155	271	8	13	4.57E-04
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9	
156	271	17	21	2.40E-03
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9	
157	271	20	20	3.17E-03
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9	
158	271	24	18	4.00E-04
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9	



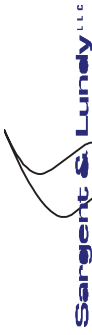
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-84 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

159	272	2	31	2.85E-04
	For Julian Day 272,	selecting COMIDA2	results # 8 of 9	
160	272	3	30	2.57E-04
	For Julian Day 272,	selecting COMIDA2	results # 8 of 9	
161	272	6	29	1.14E-04
	For Julian Day 272,	selecting COMIDA2	results # 8 of 9	
162	272	9	36	2.19E-04
	For Julian Day 272,	selecting COMIDA2	results # 8 of 9	
163	272	11	35	2.47E-04
	For Julian Day 272,	selecting COMIDA2	results # 8 of 9	
164	272	13	34	1.14E-04
	For Julian Day 272,	selecting COMIDA2	results # 8 of 9	
165	272	15	32	3.61E-04
	For Julian Day 272,	selecting COMIDA2	results # 8 of 9	
166	272	21	32	3.61E-04
	For Julian Day 272,	selecting COMIDA2	results # 8 of 9	
167	274	20	11	6.66E-03
	For Julian Day 274,	selecting COMIDA2	results # 8 of 9	
168	274	21	15	2.97E-03
	For Julian Day 274,	selecting COMIDA2	results # 8 of 9	
169	275	10	4	3.11E-03
	For Julian Day 275,	selecting COMIDA2	results # 8 of 9	
170	276	3	21	2.40E-03
	For Julian Day 276,	selecting COMIDA2	results # 8 of 9	
171	276	18	10	4.33E-03
	For Julian Day 276,	selecting COMIDA2	results # 8 of 9	
172	277	17	3	3.14E-04
	For Julian Day 277,	selecting COMIDA2	results # 8 of 9	
173	278	12	1	2.47E-04
	For Julian Day 278,	selecting COMIDA2	results # 8 of 9	
174	280	9	4	3.11E-03
	For Julian Day 280,	selecting COMIDA2	results # 8 of 9	
175	281	21	10	4.33E-03
	For Julian Day 281,	selecting COMIDA2	results # 8 of 9	
176	281	24	13	4.57E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related	
----------------	---	--------------------	--

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-85	of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 281, selecting COMIDA2 results # 8 of 9
 177 282 6 13 4.57E-04

For Julian Day 282, selecting COMIDA2 results # 8 of 9
 178 282 7 13 4.57E-04

For Julian Day 282, selecting COMIDA2 results # 8 of 9
 179 282 8 9 8.75E-04

For Julian Day 282, selecting COMIDA2 results # 8 of 9
 180 285 8 7 7.65E-03

For Julian Day 285, selecting COMIDA2 results # 8 of 9
 181 285 14 2 3.82E-03

For Julian Day 285, selecting COMIDA2 results # 8 of 9
 182 289 23 12 1.27E-02

For Julian Day 289, selecting COMIDA2 results # 9 of 9
 183 292 21 19 9.51E-04

For Julian Day 292, selecting COMIDA2 results # 9 of 9
 184 292 24 27 2.76E-04

For Julian Day 292, selecting COMIDA2 results # 9 of 9
 185 293 1 32 3.61E-04

For Julian Day 293, selecting COMIDA2 results # 9 of 9
 186 293 3 17 3.45E-03

For Julian Day 293, selecting COMIDA2 results # 9 of 9
 187 297 22 15 2.97E-03

For Julian Day 297, selecting COMIDA2 results # 9 of 9
 188 299 7 10 4.33E-03

For Julian Day 299, selecting COMIDA2 results # 9 of 9
 189 299 18 3 3.14E-04

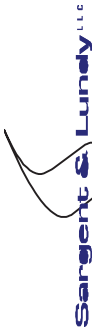
For Julian Day 299, selecting COMIDA2 results # 9 of 9
 190 300 3 11 6.66E-03

For Julian Day 300, selecting COMIDA2 results # 9 of 9
 191 300 16 6 1.22E-02

For Julian Day 300, selecting COMIDA2 results # 9 of 9
 192 301 20 14 2.25E-03

For Julian Day 301, selecting COMIDA2 results # 9 of 9
 193 302 14 5 6.36E-03

For Julian Day 302, selecting COMIDA2 results # 9 of 9



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related Non-Safety Related

Page 1.1-86 of 1.1-373

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

194	304	6	24	1.14E-04
For Julian Day 304,	selecting COMIDA2	results #	9 of 9	
195	309	9	18	4.00E-04
For Julian Day 309,	selecting COMIDA2	results #	9 of 9	
196	309	16	22	7.23E-04
For Julian Day 309,	selecting COMIDA2	results #	9 of 9	
197	313	1	16	3.17E-03
For Julian Day 313,	selecting COMIDA2	results #	9 of 9	
198	314	2	12	1.27E-02
For Julian Day 314,	selecting COMIDA2	results #	9 of 9	
199	315	2	31	2.85E-04
For Julian Day 315,	selecting COMIDA2	results #	9 of 9	
200	315	5	31	2.85E-04
For Julian Day 315,	selecting COMIDA2	results #	9 of 9	
201	315	7	30	2.57E-04
For Julian Day 315,	selecting COMIDA2	results #	9 of 9	
202	315	9	30	2.57E-04
For Julian Day 315,	selecting COMIDA2	results #	9 of 9	
203	315	10	29	1.14E-04
For Julian Day 315,	selecting COMIDA2	results #	9 of 9	
204	315	11	28	1.14E-04
For Julian Day 315,	selecting COMIDA2	results #	9 of 9	
205	315	12	27	2.76E-04
For Julian Day 315,	selecting COMIDA2	results #	9 of 9	
206	317	20	22	7.23E-04
For Julian Day 317,	selecting COMIDA2	results #	9 of 9	
207	318	6	7	7.65E-03
For Julian Day 318,	selecting COMIDA2	results #	9 of 9	
208	321	22	14	2.25E-03
For Julian Day 321,	selecting COMIDA2	results #	9 of 9	
209	323	11	11	6.66E-03
For Julian Day 323,	selecting COMIDA2	results #	9 of 9	

TRIAL	DAY	HOUR	BIN	PRBMET
201	315	7	30	2.57E-04
202	315	9	30	2.57E-04
203	315	10	29	1.14E-04
204	315	11	28	1.14E-04
205	315	12	27	2.76E-04
206	317	20	22	7.23E-04
207	318	6	7	7.65E-03
208	321	22	14	2.25E-03
209	323	11	11	6.66E-03

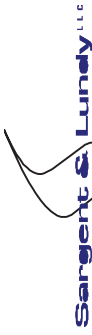


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-87 of 1.1-373

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

210	324	4	13	4.57E-04
For Julian Day 324,	selecting	COMIDA2	results #	9 of 9
211	324	18	9	8.75E-04
For Julian Day 324,	selecting	COMIDA2	results #	9 of 9
212	324	21	13	4.57E-04
For Julian Day 324,	selecting	COMIDA2	results #	9 of 9
213	325	18	24	1.14E-04
For Julian Day 325,	selecting	COMIDA2	results #	9 of 9
214	325	19	23	1.14E-04
For Julian Day 325,	selecting	COMIDA2	results #	9 of 9
215	326	8	5	6.36E-03
For Julian Day 326,	selecting	COMIDA2	results #	9 of 9
216	326	17	21	2.40E-03
For Julian Day 326,	selecting	COMIDA2	results #	9 of 9
217	326	21	20	3.17E-03
For Julian Day 326,	selecting	COMIDA2	results #	9 of 9
218	327	3	19	9.51E-04
For Julian Day 327,	selecting	COMIDA2	results #	9 of 9
219	327	18	17	3.45E-03
For Julian Day 327,	selecting	COMIDA2	results #	9 of 9
220	328	13	4	3.11E-03
For Julian Day 328,	selecting	COMIDA2	results #	9 of 9
221	328	24	21	2.40E-03
For Julian Day 328,	selecting	COMIDA2	results #	9 of 9
222	330	20	8	2.64E-03
For Julian Day 330,	selecting	COMIDA2	results #	9 of 9
223	331	17	6	1.22E-02
For Julian Day 331,	selecting	COMIDA2	results #	9 of 9
224	333	5	32	3.61E-04
For Julian Day 333,	selecting	COMIDA2	results #	9 of 9
225	333	6	27	2.76E-04
For Julian Day 333,	selecting	COMIDA2	results #	9 of 9
226	333	8	17	3.45E-03
For Julian Day 333,	selecting	COMIDA2	results #	9 of 9
227	335	4	9	8.75E-04



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-88 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 335, selecting COMIDA2 results # 1 of 9
 228 335 7 15 2.97E-03

For Julian Day 335, selecting COMIDA2 results # 1 of 9
 229 336 1 20 3.17E-03

For Julian Day 336, selecting COMIDA2 results # 1 of 9
 230 336 15 8 2.64E-03

For Julian Day 336, selecting COMIDA2 results # 1 of 9
 231 338 1 14 2.25E-03

For Julian Day 338, selecting COMIDA2 results # 1 of 9
 232 338 8 12 1.27E-02

For Julian Day 338, selecting COMIDA2 results # 1 of 9
 233 342 8 22 7.23E-04

For Julian Day 342, selecting COMIDA2 results # 1 of 9
 234 342 11 18 4.00E-04

For Julian Day 342, selecting COMIDA2 results # 1 of 9
 235 343 18 16 3.17E-03

For Julian Day 343, selecting COMIDA2 results # 1 of 9
 236 344 4 26 2.95E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 237 344 8 26 2.95E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 238 344 10 25 3.04E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 239 344 13 25 3.04E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 240 344 14 24 1.14E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 241 344 15 23 1.14E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 242 345 8 19 9.51E-04

For Julian Day 345, selecting COMIDA2 results # 1 of 9
 243 345 21 14 2.25E-03

For Julian Day 345, selecting COMIDA2 results # 1 of 9
 244 346 10 18 4.00E-04

For Julian Day 346, selecting COMIDA2 results # 1 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-89 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related
245	349	14	2 3.82E-03
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9
246	349	17	7 7.65E-03
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9
247	350	24	11 6.66E-03
For Julian Day 350,	selecting	COMIDA2	results # 1 of 9
248	352	22	10 4.33E-03
For Julian Day 352,	selecting	COMIDA2	results # 1 of 9
249	353	17	10 4.33E-03
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9
250	353	24	21 2.40E-03
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9

TRIAL	DAY	HOUR	BIN	PRBMET
251	356	21	15	2.97E-03
For Julian Day 356,	selecting	COMIDA2	results # 1 of 9	
252	358	6	16	3.17E-03
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9	
253	358	22	12	1.27E-02
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9	
254	363	22	7	7.65E-03
For Julian Day 363,	selecting	COMIDA2	results # 1 of 9	
255	365	4	13	4.57E-04
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9	
256	365	9	13	4.57E-04
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9	
257	2	7	19	9.51E-04
For Julian Day 2,	selecting	COMIDA2	results # 1 of 9	
258	3	11	14	2.25E-03
For Julian Day 3,	selecting	COMIDA2	results # 1 of 9	
259	5	19	11	6.66E-03
For Julian Day 5,	selecting	COMIDA2	results # 1 of 9	
260	6	9	6	1.22E-02
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9	



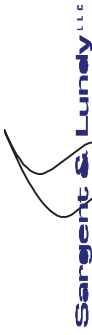
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-90	of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

261	6	17	8	2.64E-03
For Julian Day	6,	selecting	COMIDA2	results # 1 of 9
262	10	13	2	3.82E-03
For Julian Day	10,	selecting	COMIDA2	results # 1 of 9
263	13	10	20	3.17E-03
For Julian Day	13,	selecting	COMIDA2	results # 1 of 9
264	16	2	8	2.64E-03
For Julian Day	16,	selecting	COMIDA2	results # 1 of 9
265	16	20	7	7.65E-03
For Julian Day	16,	selecting	COMIDA2	results # 1 of 9
266	18	10	17	3.45E-03
For Julian Day	18,	selecting	COMIDA2	results # 1 of 9
267	19	10	8	2.64E-03
For Julian Day	19,	selecting	COMIDA2	results # 1 of 9
268	20	9	6	1.22E-02
For Julian Day	20,	selecting	COMIDA2	results # 1 of 9
269	23	1	8	2.64E-03
For Julian Day	23,	selecting	COMIDA2	results # 1 of 9
270	24	4	3	3.14E-04
For Julian Day	24,	selecting	COMIDA2	results # 1 of 9
271	24	15	7	7.65E-03
For Julian Day	24,	selecting	COMIDA2	results # 1 of 9
272	25	14	20	3.17E-03
For Julian Day	25,	selecting	COMIDA2	results # 1 of 9
273	25	20	19	9.51E-04
For Julian Day	25,	selecting	COMIDA2	results # 1 of 9
274	25	21	18	4.00E-04
For Julian Day	25,	selecting	COMIDA2	results # 1 of 9
275	26	2	17	3.45E-03
For Julian Day	26,	selecting	COMIDA2	results # 1 of 9
276	33	17	9	8.75E-04
For Julian Day	33,	selecting	COMIDA2	results # 2 of 9
277	33	19	15	2.97E-03
For Julian Day	33,	selecting	COMIDA2	results # 2 of 9
278	36	23	18	4.00E-04



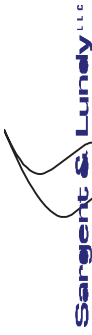
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-91 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 279	36,	selecting	COMIDA2	results # 2	of 9
280	37	selecting	COMIDA2	results # 2	of 9
281	39	selecting	COMIDA2	results # 2	of 9
282	40	selecting	COMIDA2	results # 2	of 9
283	42	selecting	COMIDA2	results # 2	of 9
284	42	selecting	COMIDA2	results # 2	of 9
285	43	selecting	COMIDA2	results # 2	of 9
286	44	selecting	COMIDA2	results # 2	of 9
287	44	selecting	COMIDA2	results # 2	of 9
288	46	selecting	COMIDA2	results # 2	of 9
289	47	selecting	COMIDA2	results # 2	of 9
290	47	selecting	COMIDA2	results # 2	of 9
291	48	selecting	COMIDA2	results # 2	of 9
292	48	selecting	COMIDA2	results # 2	of 9
293	53	selecting	COMIDA2	results # 2	of 9
294	53	selecting	COMIDA2	results # 2	of 9
295	55	selecting	COMIDA2	results # 2	of 9
For Julian Day 62,	selecting	COMIDA2	results # 2	of 9	



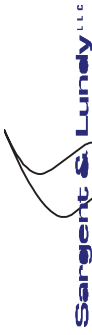
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-92 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related
296	62	23	16 3.17E-03
For Julian Day 62,	selecting COMIDA2 results # 2 of 9		
297	63	19	14 2.25E-03
For Julian Day 63,	selecting COMIDA2 results # 2 of 9		
298	64	1	15 2.97E-03
For Julian Day 64,	selecting COMIDA2 results # 2 of 9		
299	64	15	5 6.36E-03
For Julian Day 64,	selecting COMIDA2 results # 2 of 9		
300	66	6	27 2.76E-04
For Julian Day 66,	selecting COMIDA2 results # 2 of 9		

TRIAL	DAY	HOUR	BIN	PRBMET
301	66	7	32	3.61E-04
For Julian Day 66,	selecting COMIDA2 results # 2 of 9			
302	66	8	22	7.23E-04
For Julian Day 66,	selecting COMIDA2 results # 2 of 9			
303	66	12	35	2.47E-04
For Julian Day 66,	selecting COMIDA2 results # 2 of 9			
304	68	19	10	4.33E-03
For Julian Day 68,	selecting COMIDA2 results # 2 of 9			
305	69	15	1	2.47E-04
For Julian Day 69,	selecting COMIDA2 results # 2 of 9			
306	72	11	2	3.82E-03
For Julian Day 72,	selecting COMIDA2 results # 2 of 9			
307	74	8	10	4.33E-03
For Julian Day 74,	selecting COMIDA2 results # 2 of 9			
308	75	24	21	2.40E-03
For Julian Day 75,	selecting COMIDA2 results # 2 of 9			
309	76	6	19	9.51E-04
For Julian Day 76,	selecting COMIDA2 results # 2 of 9			
310	78	6	3	3.14E-04
For Julian Day 78,	selecting COMIDA2 results # 2 of 9			
311	79	2	22	7.23E-04
For Julian Day 79,	selecting COMIDA2 results # 2 of 9			

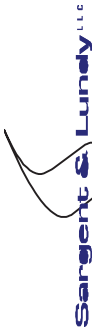


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-93 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

312	79	6	17	3.45E-03		
For Julian Day	79,	selecting	COMIDA2	results # 2 of 9		
313	80	2	11	6.66E-03		
For Julian Day	80,	selecting	COMIDA2	results # 2 of 9		
314	80	5	13	4.57E-04		
For Julian Day	80,	selecting	COMIDA2	results # 2 of 9		
315	81	19	8	2.64E-03		
For Julian Day	81,	selecting	COMIDA2	results # 2 of 9		
316	84	24	18	4.00E-04		
For Julian Day	84,	selecting	COMIDA2	results # 2 of 9		
317	85	3	17	3.45E-03		
For Julian Day	85,	selecting	COMIDA2	results # 2 of 9		
318	86	13	12	1.27E-02		
For Julian Day	86,	selecting	COMIDA2	results # 2 of 9		
319	87	7	20	3.17E-03		
For Julian Day	87,	selecting	COMIDA2	results # 2 of 9		
320	89	13	1	2.47E-04		
For Julian Day	89,	selecting	COMIDA2	results # 2 of 9		
321	90	19	19	9.51E-04		
For Julian Day	90,	selecting	COMIDA2	results # 2 of 9		
322	91	2	20	3.17E-03		
For Julian Day	91,	selecting	COMIDA2	results # 2 of 9		
323	94	1	19	9.51E-04		
For Julian Day	94,	selecting	COMIDA2	results # 3 of 9		
324	95	20	8	2.64E-03		
For Julian Day	95,	selecting	COMIDA2	results # 3 of 9		
325	96	21	12	1.27E-02		
For Julian Day	96,	selecting	COMIDA2	results # 3 of 9		
326	97	11	2	3.82E-03		
For Julian Day	97,	selecting	COMIDA2	results # 3 of 9		
327	97	24	15	2.97E-03		
For Julian Day	97,	selecting	COMIDA2	results # 3 of 9		
328	98	5	14	2.25E-03		
For Julian Day	98,	selecting	COMIDA2	results # 3 of 9		
329	98	8	15	2.97E-03		



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-94 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 98,	selecting COMIDA2	results # 3 of 9	330	13	2	3.82E-03
For Julian Day 98,	selecting COMIDA2	results # 3 of 9	331	8	21	2.40E-03
For Julian Day 99,	selecting COMIDA2	results # 3 of 9	332	23	18	4.00E-04
For Julian Day 99,	selecting COMIDA2	results # 3 of 9	333	100	19	1.22E-02
For Julian Day 100,	selecting COMIDA2	results # 3 of 9	334	100	22	3.17E-03
For Julian Day 100,	selecting COMIDA2	results # 3 of 9	335	102	8	3.17E-03
For Julian Day 102,	selecting COMIDA2	results # 3 of 9	336	102	12	7.65E-03
For Julian Day 102,	selecting COMIDA2	results # 3 of 9	337	104	14	2.47E-04
For Julian Day 104,	selecting COMIDA2	results # 3 of 9	338	104	17	7.23E-04
For Julian Day 104,	selecting COMIDA2	results # 3 of 9	339	104	19	3.61E-04
For Julian Day 104,	selecting COMIDA2	results # 3 of 9	340	105	2	2.40E-03
For Julian Day 105,	selecting COMIDA2	results # 3 of 9	341	105	12	3.45E-03
For Julian Day 105,	selecting COMIDA2	results # 3 of 9	342	105	14	2.95E-04
For Julian Day 105,	selecting COMIDA2	results # 3 of 9	343	107	11	2.47E-04
For Julian Day 107,	selecting COMIDA2	results # 3 of 9	344	107	13	2.47E-04
For Julian Day 107,	selecting COMIDA2	results # 3 of 9	345	109	18	3.17E-03
For Julian Day 109,	selecting COMIDA2	results # 3 of 9	346	110	3	4.57E-04
For Julian Day 110,	selecting COMIDA2	results # 3 of 9				



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-95 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

347	110	7	14	2.25E-03
For Julian Day 110,	selecting	COMIDA2	results # 3	of 9
348	112	7	5	6.36E-03
For Julian Day 112,	selecting	COMIDA2	results # 3	of 9
349	114	2	9	8.75E-04
For Julian Day 114,	selecting	COMIDA2	results # 3	of 9
350	114	14	31	2.85E-04
For Julian Day 114,	selecting	COMIDA2	results # 3	of 9

TRIAL	DAY	HOUR	BIN	PRBMET
351	114	15	31	2.85E-04
For Julian Day 114,	selecting	COMIDA2	results # 3	of 9
352	114	18	30	2.57E-04
For Julian Day 114,	selecting	COMIDA2	results # 3	of 9
353	114	19	29	1.14E-04
For Julian Day 114,	selecting	COMIDA2	results # 3	of 9
354	114	20	27	2.76E-04
For Julian Day 114,	selecting	COMIDA2	results # 3	of 9
355	114	24	4	3.11E-03
For Julian Day 114,	selecting	COMIDA2	results # 3	of 9
356	116	22	8	2.64E-03
For Julian Day 116,	selecting	COMIDA2	results # 3	of 9
357	117	1	25	3.04E-04
For Julian Day 117,	selecting	COMIDA2	results # 3	of 9
358	117	17	22	7.23E-04
For Julian Day 117,	selecting	COMIDA2	results # 3	of 9
359	123	18	16	3.17E-03
For Julian Day 123,	selecting	COMIDA2	results # 3	of 9
360	124	6	17	3.45E-03
For Julian Day 124,	selecting	COMIDA2	results # 3	of 9
361	124	10	20	3.17E-03
For Julian Day 124,	selecting	COMIDA2	results # 3	of 9
362	125	15	2	3.82E-03
For Julian Day 125,	selecting	COMIDA2	results # 3	of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-96 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

363	125	17	6	1.22E-02
For Julian Day 125,	selecting	COMIDA2	results # 3	of 9
364	127	11	1	2.47E-04
For Julian Day 127,	selecting	COMIDA2	results # 3	of 9
365	128	11	21	2.40E-03
For Julian Day 128,	selecting	COMIDA2	results # 3	of 9
366	128	14	18	4.00E-04
For Julian Day 128,	selecting	COMIDA2	results # 3	of 9
367	130	17	36	2.19E-04
For Julian Day 130,	selecting	COMIDA2	results # 3	of 9
368	130	19	35	2.47E-04
For Julian Day 130,	selecting	COMIDA2	results # 3	of 9
369	130	22	35	2.47E-04
For Julian Day 130,	selecting	COMIDA2	results # 3	of 9
370	130	23	34	1.14E-04
For Julian Day 130,	selecting	COMIDA2	results # 3	of 9
371	131	1	34	1.14E-04
For Julian Day 131,	selecting	COMIDA2	results # 3	of 9
372	132	5	10	4.33E-03
For Julian Day 132,	selecting	COMIDA2	results # 3	of 9
373	132	23	31	2.85E-04
For Julian Day 132,	selecting	COMIDA2	results # 3	of 9
374	133	2	31	2.85E-04
For Julian Day 133,	selecting	COMIDA2	results # 3	of 9
375	133	4	30	2.57E-04
For Julian Day 133,	selecting	COMIDA2	results # 3	of 9
376	133	8	30	2.57E-04
For Julian Day 133,	selecting	COMIDA2	results # 3	of 9
377	133	9	29	1.14E-04
For Julian Day 133,	selecting	COMIDA2	results # 3	of 9
378	133	10	28	1.14E-04
For Julian Day 133,	selecting	COMIDA2	results # 3	of 9
379	137	9	3	3.14E-04
For Julian Day 137,	selecting	COMIDA2	results # 4	of 9
380	137	21	11	6.66E-03



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-97	of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 137,	selecting	COMIDA2	results	#	4	of	9
381	141	15	2		3.82E-03		
For Julian Day 141,	selecting	COMIDA2	results	#	4	of	9
382	142	18	4		3.11E-03		
For Julian Day 142,	selecting	COMIDA2	results	#	4	of	9
383	142	21	12		1.27E-02		
For Julian Day 142,	selecting	COMIDA2	results	#	4	of	9
384	143	19	15		2.97E-03		
For Julian Day 143,	selecting	COMIDA2	results	#	4	of	9
385	144	22	16		3.17E-03		
For Julian Day 144,	selecting	COMIDA2	results	#	4	of	9
386	146	15	7		7.65E-03		
For Julian Day 146,	selecting	COMIDA2	results	#	4	of	9
387	146	21	27		2.76E-04		
For Julian Day 146,	selecting	COMIDA2	results	#	4	of	9
388	147	5	19		9.51E-04		
For Julian Day 147,	selecting	COMIDA2	results	#	4	of	9
389	148	13	1		2.47E-04		
For Julian Day 148,	selecting	COMIDA2	results	#	4	of	9
390	149	10	5		6.36E-03		
For Julian Day 149,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 152,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 152,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 152,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 153,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 153,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 153,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 153,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 153,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 154,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 155,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 156,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 156,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 157,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 157,	selecting	COMIDA2	results	#	4	of	9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-99	of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-100 of 1.1-373

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 229,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9



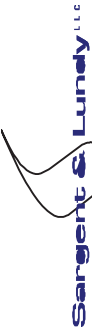
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-101 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting	COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/>
	Non-Safety Related	

Calc No.	2009-11222		
Rev.	2	Date	
Page	1.1-102 of 1.1-373		

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 277,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 278,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 280,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 289,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 297,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting	COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222
Rev. 2
Page 1.1-103 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-104 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 343,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 344,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 344,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 344,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 344,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 344,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 344,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 345,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 345,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 346,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 349,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 349,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 350,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 352,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 353,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 353,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 356,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 358,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 358,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 363,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 365,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 365,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 2,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 3,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 5,	selecting COMIDA2 results	# 1 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.1-105 of 1.1-373

Client PSEG Nuclear Development	Safety Related	Non-Safety Related
Project PSEG ESPA	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-106 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-107 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 98,	selecting	COMIDA2	results # 3 of 9
For Julian Day 99,	selecting	COMIDA2	results # 3 of 9
For Julian Day 99,	selecting	COMIDA2	results # 3 of 9
For Julian Day 100,	selecting	COMIDA2	results # 3 of 9
For Julian Day 100,	selecting	COMIDA2	results # 3 of 9
For Julian Day 102,	selecting	COMIDA2	results # 3 of 9
For Julian Day 102,	selecting	COMIDA2	results # 3 of 9
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9
For Julian Day 107,	selecting	COMIDA2	results # 3 of 9
For Julian Day 107,	selecting	COMIDA2	results # 3 of 9
For Julian Day 109,	selecting	COMIDA2	results # 3 of 9
For Julian Day 110,	selecting	COMIDA2	results # 3 of 9
For Julian Day 110,	selecting	COMIDA2	results # 3 of 9
For Julian Day 112,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 116,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 123,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 127,	selecting	COMIDA2	results # 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.1-108 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

Equip. No.	Safety Related	Non-Safety Related	Prepared by	Reviewed by	Approved by
For Julian Day 128,	selecting	COMIDA2 results # 3 of 9			
For Julian Day 128,	selecting	COMIDA2 results # 3 of 9			
For Julian Day 130,	selecting	COMIDA2 results # 3 of 9			
For Julian Day 130,	selecting	COMIDA2 results # 3 of 9			
For Julian Day 130,	selecting	COMIDA2 results # 3 of 9			
For Julian Day 130,	selecting	COMIDA2 results # 3 of 9			
For Julian Day 131,	selecting	COMIDA2 results # 3 of 9			
For Julian Day 132,	selecting	COMIDA2 results # 3 of 9			
For Julian Day 132,	selecting	COMIDA2 results # 3 of 9			
For Julian Day 133,	selecting	COMIDA2 results # 3 of 9			
For Julian Day 133,	selecting	COMIDA2 results # 3 of 9			
For Julian Day 133,	selecting	COMIDA2 results # 3 of 9			
For Julian Day 133,	selecting	COMIDA2 results # 3 of 9			
For Julian Day 133,	selecting	COMIDA2 results # 3 of 9			
For Julian Day 133,	selecting	COMIDA2 results # 3 of 9			
For Julian Day 137,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 137,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 141,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 142,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 142,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 143,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 144,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 146,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 146,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 147,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 148,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 149,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 152,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 152,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 152,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 153,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 153,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 153,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 153,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 153,	selecting	COMIDA2 results # 4 of 9			
For Julian Day 154,	selecting	COMIDA2 results # 4 of 9			



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-110 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 169,	selecting COMIDA2 results	# 5 of 9
For Julian Day 169,	selecting COMIDA2 results	# 5 of 9
For Julian Day 169,	selecting COMIDA2 results	# 5 of 9
For Julian Day 169,	selecting COMIDA2 results	# 5 of 9
For Julian Day 173,	selecting COMIDA2 results	# 5 of 9
For Julian Day 174,	selecting COMIDA2 results	# 5 of 9
For Julian Day 174,	selecting COMIDA2 results	# 5 of 9
For Julian Day 174,	selecting COMIDA2 results	# 5 of 9
For Julian Day 174,	selecting COMIDA2 results	# 5 of 9
For Julian Day 177,	selecting COMIDA2 results	# 5 of 9
For Julian Day 177,	selecting COMIDA2 results	# 5 of 9
For Julian Day 177,	selecting COMIDA2 results	# 5 of 9
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 185,	selecting COMIDA2 results	# 5 of 9
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 189,	selecting COMIDA2 results	# 5 of 9
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 198,	selecting COMIDA2 results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-111 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-114 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 297,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 301,	selecting	COMIDA2	results # 9 of 9
For Julian Day 302,	selecting	COMIDA2	results # 9 of 9
For Julian Day 304,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 313,	selecting	COMIDA2	results # 9 of 9
For Julian Day 314,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 317,	selecting	COMIDA2	results # 9 of 9
For Julian Day 318,	selecting	COMIDA2	results # 9 of 9
For Julian Day 321,	selecting	COMIDA2	results # 9 of 9
For Julian Day 323,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 325,	selecting	COMIDA2	results # 9 of 9
For Julian Day 325,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 327,	selecting	COMIDA2	results # 9 of 9
For Julian Day 327,	selecting	COMIDA2	results # 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-115 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-116 of 1.1-373

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 365, selecting COMIDA2 results # 1 of 9
 For Julian Day 365, selecting COMIDA2 results # 1 of 9
 For Julian Day 2, selecting COMIDA2 results # 1 of 9
 For Julian Day 3, selecting COMIDA2 results # 1 of 9
 For Julian Day 5, selecting COMIDA2 results # 1 of 9
 For Julian Day 6, selecting COMIDA2 results # 1 of 9
 For Julian Day 6, selecting COMIDA2 results # 1 of 9
 For Julian Day 10, selecting COMIDA2 results # 1 of 9
 For Julian Day 13, selecting COMIDA2 results # 1 of 9
 For Julian Day 16, selecting COMIDA2 results # 1 of 9
 For Julian Day 16, selecting COMIDA2 results # 1 of 9
 For Julian Day 18, selecting COMIDA2 results # 1 of 9
 For Julian Day 19, selecting COMIDA2 results # 1 of 9
 For Julian Day 20, selecting COMIDA2 results # 1 of 9
 For Julian Day 23, selecting COMIDA2 results # 1 of 9
 For Julian Day 24, selecting COMIDA2 results # 1 of 9
 For Julian Day 24, selecting COMIDA2 results # 1 of 9
 For Julian Day 25, selecting COMIDA2 results # 1 of 9
 For Julian Day 25, selecting COMIDA2 results # 1 of 9
 For Julian Day 25, selecting COMIDA2 results # 1 of 9
 For Julian Day 26, selecting COMIDA2 results # 1 of 9
 For Julian Day 33, selecting COMIDA2 results # 2 of 9
 For Julian Day 33, selecting COMIDA2 results # 2 of 9
 For Julian Day 36, selecting COMIDA2 results # 2 of 9
 For Julian Day 37, selecting COMIDA2 results # 2 of 9
 For Julian Day 39, selecting COMIDA2 results # 2 of 9
 For Julian Day 40, selecting COMIDA2 results # 2 of 9
 For Julian Day 42, selecting COMIDA2 results # 2 of 9
 For Julian Day 42, selecting COMIDA2 results # 2 of 9
 For Julian Day 43, selecting COMIDA2 results # 2 of 9
 For Julian Day 44, selecting COMIDA2 results # 2 of 9
 For Julian Day 44, selecting COMIDA2 results # 2 of 9
 For Julian Day 46, selecting COMIDA2 results # 2 of 9
 For Julian Day 47, selecting COMIDA2 results # 2 of 9
 For Julian Day 47, selecting COMIDA2 results # 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-117 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 48,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3	of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3	of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-118 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 96,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 97,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 97,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 98,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 98,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 98,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 99,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 99,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 100,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 100,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 102,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 102,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 104,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 104,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 104,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 105,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 105,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 105,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 107,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 107,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 109,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 110,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 110,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 112,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 116,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 117,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 117,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 123,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-119 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 124,	selecting COMIDA2 results	# 3 of 9
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9
For Julian Day 127,	selecting COMIDA2 results	# 3 of 9
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 131,	selecting COMIDA2 results	# 3 of 9
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9
For Julian Day 141,	selecting COMIDA2 results	# 4 of 9
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9
For Julian Day 143,	selecting COMIDA2 results	# 4 of 9
For Julian Day 144,	selecting COMIDA2 results	# 4 of 9
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9
For Julian Day 147,	selecting COMIDA2 results	# 4 of 9
For Julian Day 148,	selecting COMIDA2 results	# 4 of 9
For Julian Day 149,	selecting COMIDA2 results	# 4 of 9
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.1-120 of 1.1-373

Client PSEG Nuclear Development			Prepared by	Date
Project PSEG ESPA			Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

For Julian Day 153,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 153,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 153,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 153,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 154,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 155,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 156,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 156,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 157,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 157,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 157,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 157,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 157,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 157,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 157,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 157,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 158,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 159,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 159,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 160,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 160,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 162,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 162,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 162,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 162,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 162,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 162,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 162,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 162,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 163,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 163,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 166,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 166,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 166,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 166,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 167,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 167,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 168,	selecting	COMIDA2	results	#	5	of	9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-121 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
For Julian Day 173,	selecting	COMIDA2	results # 5 of 9
For Julian Day 174,	selecting	COMIDA2	results # 5 of 9
For Julian Day 174,	selecting	COMIDA2	results # 5 of 9
For Julian Day 174,	selecting	COMIDA2	results # 5 of 9
For Julian Day 177,	selecting	COMIDA2	results # 5 of 9
For Julian Day 177,	selecting	COMIDA2	results # 5 of 9
For Julian Day 177,	selecting	COMIDA2	results # 5 of 9
For Julian Day 180,	selecting	COMIDA2	results # 5 of 9
For Julian Day 180,	selecting	COMIDA2	results # 5 of 9
For Julian Day 180,	selecting	COMIDA2	results # 5 of 9
For Julian Day 183,	selecting	COMIDA2	results # 5 of 9
For Julian Day 183,	selecting	COMIDA2	results # 5 of 9
For Julian Day 183,	selecting	COMIDA2	results # 5 of 9
For Julian Day 183,	selecting	COMIDA2	results # 5 of 9
For Julian Day 183,	selecting	COMIDA2	results # 5 of 9
For Julian Day 185,	selecting	COMIDA2	results # 5 of 9
For Julian Day 186,	selecting	COMIDA2	results # 5 of 9
For Julian Day 186,	selecting	COMIDA2	results # 5 of 9
For Julian Day 187,	selecting	COMIDA2	results # 5 of 9
For Julian Day 187,	selecting	COMIDA2	results # 5 of 9
For Julian Day 187,	selecting	COMIDA2	results # 5 of 9
For Julian Day 189,	selecting	COMIDA2	results # 5 of 9
For Julian Day 190,	selecting	COMIDA2	results # 5 of 9
For Julian Day 190,	selecting	COMIDA2	results # 5 of 9
For Julian Day 194,	selecting	COMIDA2	results # 6 of 9
For Julian Day 194,	selecting	COMIDA2	results # 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-122 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 198,	selecting COMIDA2 results	# 6 of 9
For Julian Day 200,	selecting COMIDA2 results	# 6 of 9
For Julian Day 202,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 206,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 211,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 218,	selecting COMIDA2 results	# 6 of 9
For Julian Day 218,	selecting COMIDA2 results	# 6 of 9
For Julian Day 223,	selecting COMIDA2 results	# 7 of 9
For Julian Day 224,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.1-123 of 1.1-373

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 229,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-124 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 255,	selecting	COMIDA2	results # 7 of 9
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9
For Julian Day 263,	selecting	COMIDA2	results # 8 of 9
For Julian Day 264,	selecting	COMIDA2	results # 8 of 9
For Julian Day 266,	selecting	COMIDA2	results # 8 of 9
For Julian Day 269,	selecting	COMIDA2	results # 8 of 9
For Julian Day 269,	selecting	COMIDA2	results # 8 of 9
For Julian Day 270,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 275,	selecting	COMIDA2	results # 8 of 9
For Julian Day 276,	selecting	COMIDA2	results # 8 of 9
For Julian Day 276,	selecting	COMIDA2	results # 8 of 9
For Julian Day 277,	selecting	COMIDA2	results # 8 of 9
For Julian Day 278,	selecting	COMIDA2	results # 8 of 9
For Julian Day 280,	selecting	COMIDA2	results # 8 of 9
For Julian Day 281,	selecting	COMIDA2	results # 8 of 9
For Julian Day 281,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-125 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 285,	selecting COMIDA2 results	# 8 of 9
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9
For Julian Day 289,	selecting COMIDA2 results	# 9 of 9
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9
For Julian Day 297,	selecting COMIDA2 results	# 9 of 9
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9
For Julian Day 301,	selecting COMIDA2 results	# 9 of 9
For Julian Day 302,	selecting COMIDA2 results	# 9 of 9
For Julian Day 304,	selecting COMIDA2 results	# 9 of 9
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9
For Julian Day 313,	selecting COMIDA2 results	# 9 of 9
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-126 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-127 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 353,	selecting	COMIDA2	results # 1 of 9
For Julian Day 356,	selecting	COMIDA2	results # 1 of 9
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9
For Julian Day 363,	selecting	COMIDA2	results # 1 of 9
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9
For Julian Day 2,	selecting	COMIDA2	results # 1 of 9
For Julian Day 3,	selecting	COMIDA2	results # 1 of 9
For Julian Day 5,	selecting	COMIDA2	results # 1 of 9
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9
For Julian Day 10,	selecting	COMIDA2	results # 1 of 9
For Julian Day 13,	selecting	COMIDA2	results # 1 of 9
For Julian Day 16,	selecting	COMIDA2	results # 1 of 9
For Julian Day 16,	selecting	COMIDA2	results # 1 of 9
For Julian Day 18,	selecting	COMIDA2	results # 1 of 9
For Julian Day 19,	selecting	COMIDA2	results # 1 of 9
For Julian Day 20,	selecting	COMIDA2	results # 1 of 9
For Julian Day 23,	selecting	COMIDA2	results # 1 of 9
For Julian Day 24,	selecting	COMIDA2	results # 1 of 9
For Julian Day 24,	selecting	COMIDA2	results # 1 of 9
For Julian Day 25,	selecting	COMIDA2	results # 1 of 9
For Julian Day 25,	selecting	COMIDA2	results # 1 of 9
For Julian Day 25,	selecting	COMIDA2	results # 1 of 9
For Julian Day 26,	selecting	COMIDA2	results # 1 of 9
For Julian Day 33,	selecting	COMIDA2	results # 2 of 9
For Julian Day 33,	selecting	COMIDA2	results # 2 of 9
For Julian Day 36,	selecting	COMIDA2	results # 2 of 9
For Julian Day 37,	selecting	COMIDA2	results # 2 of 9
For Julian Day 39,	selecting	COMIDA2	results # 2 of 9
For Julian Day 40,	selecting	COMIDA2	results # 2 of 9
For Julian Day 42,	selecting	COMIDA2	results # 2 of 9
For Julian Day 42,	selecting	COMIDA2	results # 2 of 9
For Julian Day 43,	selecting	COMIDA2	results # 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-128 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222
Rev. 2
Page 1.1-130 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting COMIDA2	results	# 4 of 9



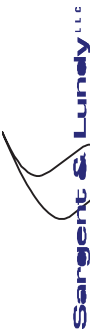
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-131 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 149,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 154,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 155,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 158,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-132 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 168,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-133 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.1-135 of 1.1-373

Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001	Equip. No.	Approved by	Date

For Julian Day 251,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 253,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 253,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 254,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 254,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 255,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 255,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 260,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 260,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 263,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 264,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 266,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 269,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 269,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 270,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 271,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 271,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 271,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 271,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 274,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 274,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 274,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 275,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 276,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 276,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 277,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 278,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 280,	selecting	COMIDA2	results	#	8	of	9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-136 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 281,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 281,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 289,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 297,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 301,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 302,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 304,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 313,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-137 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-138 of 1.1-373

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 349, selecting COMIDA2 results # 1 of 9
 For Julian Day 349, selecting COMIDA2 results # 1 of 9
 For Julian Day 350, selecting COMIDA2 results # 1 of 9
 For Julian Day 352, selecting COMIDA2 results # 1 of 9
 For Julian Day 353, selecting COMIDA2 results # 1 of 9
 For Julian Day 353, selecting COMIDA2 results # 1 of 9
 For Julian Day 356, selecting COMIDA2 results # 1 of 9
 For Julian Day 358, selecting COMIDA2 results # 1 of 9
 For Julian Day 358, selecting COMIDA2 results # 1 of 9
 For Julian Day 363, selecting COMIDA2 results # 1 of 9
 For Julian Day 365, selecting COMIDA2 results # 1 of 9
 For Julian Day 365, selecting COMIDA2 results # 1 of 9
 For Julian Day 2, selecting COMIDA2 results # 1 of 9
 For Julian Day 3, selecting COMIDA2 results # 1 of 9
 For Julian Day 5, selecting COMIDA2 results # 1 of 9
 For Julian Day 6, selecting COMIDA2 results # 1 of 9
 For Julian Day 6, selecting COMIDA2 results # 1 of 9
 For Julian Day 10, selecting COMIDA2 results # 1 of 9
 For Julian Day 13, selecting COMIDA2 results # 1 of 9
 For Julian Day 16, selecting COMIDA2 results # 1 of 9
 For Julian Day 16, selecting COMIDA2 results # 1 of 9
 For Julian Day 18, selecting COMIDA2 results # 1 of 9
 For Julian Day 19, selecting COMIDA2 results # 1 of 9
 For Julian Day 20, selecting COMIDA2 results # 1 of 9
 For Julian Day 23, selecting COMIDA2 results # 1 of 9
 For Julian Day 24, selecting COMIDA2 results # 1 of 9
 For Julian Day 24, selecting COMIDA2 results # 1 of 9
 For Julian Day 25, selecting COMIDA2 results # 1 of 9
 For Julian Day 25, selecting COMIDA2 results # 1 of 9
 For Julian Day 25, selecting COMIDA2 results # 1 of 9
 For Julian Day 26, selecting COMIDA2 results # 1 of 9
 For Julian Day 33, selecting COMIDA2 results # 2 of 9
 For Julian Day 33, selecting COMIDA2 results # 2 of 9
 For Julian Day 36, selecting COMIDA2 results # 2 of 9
 For Julian Day 37, selecting COMIDA2 results # 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.1-139 of 1.1-373

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222
Rev. 2
Page 1.1-140 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 81,	selecting COMIDA2 results	# 2 of 9
For Julian Day 84,	selecting COMIDA2 results	# 2 of 9
For Julian Day 85,	selecting COMIDA2 results	# 2 of 9
For Julian Day 86,	selecting COMIDA2 results	# 2 of 9
For Julian Day 87,	selecting COMIDA2 results	# 2 of 9
For Julian Day 89,	selecting COMIDA2 results	# 2 of 9
For Julian Day 90,	selecting COMIDA2 results	# 2 of 9
For Julian Day 91,	selecting COMIDA2 results	# 2 of 9
For Julian Day 94,	selecting COMIDA2 results	# 3 of 9
For Julian Day 95,	selecting COMIDA2 results	# 3 of 9
For Julian Day 96,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 109,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 112,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9



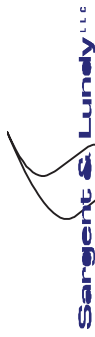
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222
Rev. 2
Page 1.1-141 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 116,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 123,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 127,	selecting	COMIDA2	results # 3 of 9
For Julian Day 128,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 131,	selecting	COMIDA2	results # 3 of 9
For Julian Day 132,	selecting	COMIDA2	results # 3 of 9
For Julian Day 132,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 141,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 143,	selecting	COMIDA2	results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-143 of 1.1-373

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	Equip. No.
Project	PSEG ESPA	
Proj. No	12380-001	

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 163, selecting COMIDA2 results # 4 of 9
 For Julian Day 163, selecting COMIDA2 results # 4 of 9
 For Julian Day 166, selecting COMIDA2 results # 4 of 9
 For Julian Day 166, selecting COMIDA2 results # 4 of 9
 For Julian Day 166, selecting COMIDA2 results # 4 of 9
 For Julian Day 166, selecting COMIDA2 results # 4 of 9
 For Julian Day 166, selecting COMIDA2 results # 4 of 9
 For Julian Day 167, selecting COMIDA2 results # 5 of 9
 For Julian Day 167, selecting COMIDA2 results # 5 of 9
 For Julian Day 168, selecting COMIDA2 results # 5 of 9
 For Julian Day 169, selecting COMIDA2 results # 5 of 9
 For Julian Day 169, selecting COMIDA2 results # 5 of 9
 For Julian Day 169, selecting COMIDA2 results # 5 of 9
 For Julian Day 169, selecting COMIDA2 results # 5 of 9
 For Julian Day 169, selecting COMIDA2 results # 5 of 9
 For Julian Day 169, selecting COMIDA2 results # 5 of 9
 For Julian Day 169, selecting COMIDA2 results # 5 of 9
 For Julian Day 169, selecting COMIDA2 results # 5 of 9
 For Julian Day 169, selecting COMIDA2 results # 5 of 9
 For Julian Day 173, selecting COMIDA2 results # 5 of 9
 For Julian Day 174, selecting COMIDA2 results # 5 of 9
 For Julian Day 174, selecting COMIDA2 results # 5 of 9
 For Julian Day 174, selecting COMIDA2 results # 5 of 9
 For Julian Day 177, selecting COMIDA2 results # 5 of 9
 For Julian Day 177, selecting COMIDA2 results # 5 of 9
 For Julian Day 177, selecting COMIDA2 results # 5 of 9
 For Julian Day 180, selecting COMIDA2 results # 5 of 9
 For Julian Day 180, selecting COMIDA2 results # 5 of 9
 For Julian Day 180, selecting COMIDA2 results # 5 of 9
 For Julian Day 183, selecting COMIDA2 results # 5 of 9
 For Julian Day 183, selecting COMIDA2 results # 5 of 9
 For Julian Day 183, selecting COMIDA2 results # 5 of 9
 For Julian Day 183, selecting COMIDA2 results # 5 of 9
 For Julian Day 185, selecting COMIDA2 results # 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-144 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-145 of 1.1-373

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	Prepared by
Project	PSEG ESPA	Reviewed by
Proj. No	12380-001	Approved by
	Equip. No.	Date

For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 229,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-146 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting	COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev. 2 Date

Page 1.1-148 of 1.1-373

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-149 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-150 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-151 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 78,	selecting COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-152 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 109,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-153 of 1.1-373	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 154,	selecting COMIDA2	results	# 4 of 9
For Julian Day 155,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 158,	selecting COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-154 of 1.1-373	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 168,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-155 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting	COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-156 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 229,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-158 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 277,	selecting COMIDA2	results	# 8 of 9
For Julian Day 278,	selecting COMIDA2	results	# 8 of 9
For Julian Day 280,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 289,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 297,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-159 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-160 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-161 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-162 of 1.1-373

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

For Julian Day 69, selecting COMIDA2 results # 2 of 9
 For Julian Day 72, selecting COMIDA2 results # 2 of 9
 For Julian Day 74, selecting COMIDA2 results # 2 of 9
 For Julian Day 75, selecting COMIDA2 results # 2 of 9
 For Julian Day 76, selecting COMIDA2 results # 2 of 9
 For Julian Day 78, selecting COMIDA2 results # 2 of 9
 For Julian Day 79, selecting COMIDA2 results # 2 of 9
 For Julian Day 79, selecting COMIDA2 results # 2 of 9
 For Julian Day 80, selecting COMIDA2 results # 2 of 9
 For Julian Day 80, selecting COMIDA2 results # 2 of 9
 For Julian Day 81, selecting COMIDA2 results # 2 of 9
 For Julian Day 84, selecting COMIDA2 results # 2 of 9
 For Julian Day 85, selecting COMIDA2 results # 2 of 9
 For Julian Day 86, selecting COMIDA2 results # 2 of 9
 For Julian Day 87, selecting COMIDA2 results # 2 of 9
 For Julian Day 89, selecting COMIDA2 results # 2 of 9
 For Julian Day 90, selecting COMIDA2 results # 2 of 9
 For Julian Day 91, selecting COMIDA2 results # 2 of 9
 For Julian Day 94, selecting COMIDA2 results # 3 of 9
 For Julian Day 95, selecting COMIDA2 results # 3 of 9
 For Julian Day 96, selecting COMIDA2 results # 3 of 9
 For Julian Day 97, selecting COMIDA2 results # 3 of 9
 For Julian Day 97, selecting COMIDA2 results # 3 of 9
 For Julian Day 98, selecting COMIDA2 results # 3 of 9
 For Julian Day 98, selecting COMIDA2 results # 3 of 9
 For Julian Day 98, selecting COMIDA2 results # 3 of 9
 For Julian Day 99, selecting COMIDA2 results # 3 of 9
 For Julian Day 99, selecting COMIDA2 results # 3 of 9
 For Julian Day 100, selecting COMIDA2 results # 3 of 9
 For Julian Day 100, selecting COMIDA2 results # 3 of 9
 For Julian Day 102, selecting COMIDA2 results # 3 of 9
 For Julian Day 102, selecting COMIDA2 results # 3 of 9
 For Julian Day 104, selecting COMIDA2 results # 3 of 9
 For Julian Day 104, selecting COMIDA2 results # 3 of 9
 For Julian Day 104, selecting COMIDA2 results # 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-163 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 109,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 112,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 116,	selecting COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9
For Julian Day 123,	selecting COMIDA2 results	# 3 of 9
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9
For Julian Day 127,	selecting COMIDA2 results	# 3 of 9
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 131,	selecting COMIDA2 results	# 3 of 9
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-164 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 141,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 143,	selecting	COMIDA2	results # 4 of 9
For Julian Day 144,	selecting	COMIDA2	results # 4 of 9
For Julian Day 146,	selecting	COMIDA2	results # 4 of 9
For Julian Day 146,	selecting	COMIDA2	results # 4 of 9
For Julian Day 147,	selecting	COMIDA2	results # 4 of 9
For Julian Day 148,	selecting	COMIDA2	results # 4 of 9
For Julian Day 149,	selecting	COMIDA2	results # 4 of 9
For Julian Day 152,	selecting	COMIDA2	results # 4 of 9
For Julian Day 152,	selecting	COMIDA2	results # 4 of 9
For Julian Day 152,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 154,	selecting	COMIDA2	results # 4 of 9
For Julian Day 155,	selecting	COMIDA2	results # 4 of 9
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 158,	selecting	COMIDA2	results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE	
ANALYSIS FOR PSEG ESPA	
Safety Related	X
Non-Safety Related	

Calc No.	2009-11222
Rev.	2
Date	
Page	1.1-165 of 1.1-373

Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Approved by	Date
Equip. No.			
For Julian Day 159,	selecting COMIDA2 results # 4 of 9		
For Julian Day 159,	selecting COMIDA2 results # 4 of 9		
For Julian Day 160,	selecting COMIDA2 results # 4 of 9		
For Julian Day 160,	selecting COMIDA2 results # 4 of 9		
For Julian Day 162,	selecting COMIDA2 results # 4 of 9		
For Julian Day 162,	selecting COMIDA2 results # 4 of 9		
For Julian Day 162,	selecting COMIDA2 results # 4 of 9		
For Julian Day 162,	selecting COMIDA2 results # 4 of 9		
For Julian Day 162,	selecting COMIDA2 results # 4 of 9		
For Julian Day 162,	selecting COMIDA2 results # 4 of 9		
For Julian Day 162,	selecting COMIDA2 results # 4 of 9		
For Julian Day 162,	selecting COMIDA2 results # 4 of 9		
For Julian Day 162,	selecting COMIDA2 results # 4 of 9		
For Julian Day 162,	selecting COMIDA2 results # 4 of 9		
For Julian Day 162,	selecting COMIDA2 results # 4 of 9		
For Julian Day 162,	selecting COMIDA2 results # 4 of 9		
For Julian Day 162,	selecting COMIDA2 results # 4 of 9		
For Julian Day 162,	selecting COMIDA2 results # 4 of 9		
For Julian Day 163,	selecting COMIDA2 results # 4 of 9		
For Julian Day 163,	selecting COMIDA2 results # 4 of 9		
For Julian Day 166,	selecting COMIDA2 results # 4 of 9		
For Julian Day 166,	selecting COMIDA2 results # 4 of 9		
For Julian Day 166,	selecting COMIDA2 results # 4 of 9		
For Julian Day 166,	selecting COMIDA2 results # 4 of 9		
For Julian Day 166,	selecting COMIDA2 results # 4 of 9		
For Julian Day 166,	selecting COMIDA2 results # 4 of 9		
For Julian Day 166,	selecting COMIDA2 results # 4 of 9		
For Julian Day 167,	selecting COMIDA2 results # 5 of 9		
For Julian Day 167,	selecting COMIDA2 results # 5 of 9		
For Julian Day 167,	selecting COMIDA2 results # 5 of 9		
For Julian Day 168,	selecting COMIDA2 results # 5 of 9		
For Julian Day 169,	selecting COMIDA2 results # 5 of 9		
For Julian Day 169,	selecting COMIDA2 results # 5 of 9		
For Julian Day 169,	selecting COMIDA2 results # 5 of 9		
For Julian Day 169,	selecting COMIDA2 results # 5 of 9		
For Julian Day 169,	selecting COMIDA2 results # 5 of 9		
For Julian Day 169,	selecting COMIDA2 results # 5 of 9		
For Julian Day 169,	selecting COMIDA2 results # 5 of 9		
For Julian Day 169,	selecting COMIDA2 results # 5 of 9		
For Julian Day 169,	selecting COMIDA2 results # 5 of 9		
For Julian Day 169,	selecting COMIDA2 results # 5 of 9		
For Julian Day 173,	selecting COMIDA2 results # 5 of 9		
For Julian Day 174,	selecting COMIDA2 results # 5 of 9		
For Julian Day 174,	selecting COMIDA2 results # 5 of 9		
For Julian Day 174,	selecting COMIDA2 results # 5 of 9		
For Julian Day 174,	selecting COMIDA2 results # 5 of 9		
For Julian Day 177,	selecting COMIDA2 results # 5 of 9		
For Julian Day 177,	selecting COMIDA2 results # 5 of 9		



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-166 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 177,	selecting COMIDA2 results	# 5 of 9
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 185,	selecting COMIDA2 results	# 5 of 9
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 189,	selecting COMIDA2 results	# 5 of 9
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 198,	selecting COMIDA2 results	# 6 of 9
For Julian Day 200,	selecting COMIDA2 results	# 6 of 9
For Julian Day 202,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 206,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222
ANALYSIS FOR PSEG ESPA		Rev. 2 Date
<input type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> Non-Safety Related	Page 1.1-167 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

Client	Project	Proj. No	Equip. No.	Safety Related	Non-Safety Related	Prepared by	Date
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 211,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 215,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 215,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 216,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 216,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 218,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 218,	selecting	COMIDA2	results	# 6 of 9			
For Julian Day 223,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 224,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 227,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 229,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9			
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9			



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-168 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.1-169 of 1.1-373

Client PSEG Nuclear Development	Safety Related X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001	Equip. No.	

For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 275,	selecting	COMIDA2	results # 8 of 9
For Julian Day 276,	selecting	COMIDA2	results # 8 of 9
For Julian Day 276,	selecting	COMIDA2	results # 8 of 9
For Julian Day 277,	selecting	COMIDA2	results # 8 of 9
For Julian Day 278,	selecting	COMIDA2	results # 8 of 9
For Julian Day 280,	selecting	COMIDA2	results # 8 of 9
For Julian Day 281,	selecting	COMIDA2	results # 8 of 9
For Julian Day 281,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 285,	selecting	COMIDA2	results # 8 of 9
For Julian Day 285,	selecting	COMIDA2	results # 8 of 9
For Julian Day 289,	selecting	COMIDA2	results # 9 of 9
For Julian Day 292,	selecting	COMIDA2	results # 9 of 9
For Julian Day 292,	selecting	COMIDA2	results # 9 of 9
For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 297,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 301,	selecting	COMIDA2	results # 9 of 9
For Julian Day 302,	selecting	COMIDA2	results # 9 of 9
For Julian Day 304,	selecting	COMIDA2	results # 9 of 9

Prepared by	Date
Reviewed by	Date
Approved by	Date



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-170 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 313,	selecting	COMIDA2	results # 9 of 9
For Julian Day 314,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 317,	selecting	COMIDA2	results # 9 of 9
For Julian Day 318,	selecting	COMIDA2	results # 9 of 9
For Julian Day 321,	selecting	COMIDA2	results # 9 of 9
For Julian Day 323,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 325,	selecting	COMIDA2	results # 9 of 9
For Julian Day 325,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 327,	selecting	COMIDA2	results # 9 of 9
For Julian Day 327,	selecting	COMIDA2	results # 9 of 9
For Julian Day 328,	selecting	COMIDA2	results # 9 of 9
For Julian Day 328,	selecting	COMIDA2	results # 9 of 9
For Julian Day 330,	selecting	COMIDA2	results # 9 of 9
For Julian Day 331,	selecting	COMIDA2	results # 9 of 9
For Julian Day 333,	selecting	COMIDA2	results # 9 of 9
For Julian Day 333,	selecting	COMIDA2	results # 9 of 9
For Julian Day 333,	selecting	COMIDA2	results # 9 of 9
For Julian Day 335,	selecting	COMIDA2	results # 1 of 9
For Julian Day 335,	selecting	COMIDA2	results # 1 of 9
For Julian Day 336,	selecting	COMIDA2	results # 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.1-171 of 1.1-373

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-172 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-173 of 1.1-373

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.1-174 of 1.1-373

Client PSEG Nuclear Development	<input checked="" type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 109,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-175 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 154,	selecting COMIDA2	results	# 4 of 9
For Julian Day 155,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-177 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 174,	selecting COMIDA2 results	# 5 of 9
For Julian Day 174,	selecting COMIDA2 results	# 5 of 9
For Julian Day 174,	selecting COMIDA2 results	# 5 of 9
For Julian Day 177,	selecting COMIDA2 results	# 5 of 9
For Julian Day 177,	selecting COMIDA2 results	# 5 of 9
For Julian Day 177,	selecting COMIDA2 results	# 5 of 9
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 185,	selecting COMIDA2 results	# 5 of 9
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 189,	selecting COMIDA2 results	# 5 of 9
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 198,	selecting COMIDA2 results	# 6 of 9
For Julian Day 200,	selecting COMIDA2 results	# 6 of 9
For Julian Day 202,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 206,	selecting COMIDA2 results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-178 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 229,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-179 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting	COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE	
ANALYSIS FOR PSEG ESPA	
Safety Related	X Non-Safety Related

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-180 of 1.1-373	

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

For Julian Day 271,	selecting COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 277,	selecting COMIDA2	results	# 8 of 9
For Julian Day 278,	selecting COMIDA2	results	# 8 of 9
For Julian Day 280,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 289,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 297,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222
Rev. 2
Page 1.1-181 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-182 of 1.1-373

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 333, selecting COMIDA2 results # 9 of 9
 For Julian Day 333, selecting COMIDA2 results # 9 of 9
 For Julian Day 335, selecting COMIDA2 results # 1 of 9
 For Julian Day 335, selecting COMIDA2 results # 1 of 9
 For Julian Day 336, selecting COMIDA2 results # 1 of 9
 For Julian Day 336, selecting COMIDA2 results # 1 of 9
 For Julian Day 338, selecting COMIDA2 results # 1 of 9
 For Julian Day 338, selecting COMIDA2 results # 1 of 9
 For Julian Day 342, selecting COMIDA2 results # 1 of 9
 For Julian Day 342, selecting COMIDA2 results # 1 of 9
 For Julian Day 343, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 345, selecting COMIDA2 results # 1 of 9
 For Julian Day 345, selecting COMIDA2 results # 1 of 9
 For Julian Day 346, selecting COMIDA2 results # 1 of 9
 For Julian Day 349, selecting COMIDA2 results # 1 of 9
 For Julian Day 349, selecting COMIDA2 results # 1 of 9
 For Julian Day 350, selecting COMIDA2 results # 1 of 9
 For Julian Day 352, selecting COMIDA2 results # 1 of 9
 For Julian Day 353, selecting COMIDA2 results # 1 of 9
 For Julian Day 353, selecting COMIDA2 results # 1 of 9
 For Julian Day 356, selecting COMIDA2 results # 1 of 9
 For Julian Day 358, selecting COMIDA2 results # 1 of 9
 For Julian Day 358, selecting COMIDA2 results # 1 of 9
 For Julian Day 363, selecting COMIDA2 results # 1 of 9
 For Julian Day 365, selecting COMIDA2 results # 1 of 9
 For Julian Day 365, selecting COMIDA2 results # 1 of 9
 For Julian Day 2, selecting COMIDA2 results # 1 of 9
 For Julian Day 3, selecting COMIDA2 results # 1 of 9
 For Julian Day 5, selecting COMIDA2 results # 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev. 2 Date

Page 1.1-183 of 1.1-373

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

	Safety Related	Non-Safety Related		
For Julian Day 6,	selecting COMIDA2 results # 1 of 9			
For Julian Day 6,	selecting COMIDA2 results # 1 of 9			
For Julian Day 10,	selecting COMIDA2 results # 1 of 9			
For Julian Day 13,	selecting COMIDA2 results # 1 of 9			
For Julian Day 16,	selecting COMIDA2 results # 1 of 9			
For Julian Day 16,	selecting COMIDA2 results # 1 of 9			
For Julian Day 18,	selecting COMIDA2 results # 1 of 9			
For Julian Day 19,	selecting COMIDA2 results # 1 of 9			
For Julian Day 20,	selecting COMIDA2 results # 1 of 9			
For Julian Day 23,	selecting COMIDA2 results # 1 of 9			
For Julian Day 24,	selecting COMIDA2 results # 1 of 9			
For Julian Day 24,	selecting COMIDA2 results # 1 of 9			
For Julian Day 25,	selecting COMIDA2 results # 1 of 9			
For Julian Day 25,	selecting COMIDA2 results # 1 of 9			
For Julian Day 25,	selecting COMIDA2 results # 1 of 9			
For Julian Day 26,	selecting COMIDA2 results # 1 of 9			
For Julian Day 33,	selecting COMIDA2 results # 2 of 9			
For Julian Day 33,	selecting COMIDA2 results # 2 of 9			
For Julian Day 36,	selecting COMIDA2 results # 2 of 9			
For Julian Day 37,	selecting COMIDA2 results # 2 of 9			
For Julian Day 39,	selecting COMIDA2 results # 2 of 9			
For Julian Day 40,	selecting COMIDA2 results # 2 of 9			
For Julian Day 42,	selecting COMIDA2 results # 2 of 9			
For Julian Day 42,	selecting COMIDA2 results # 2 of 9			
For Julian Day 43,	selecting COMIDA2 results # 2 of 9			
For Julian Day 44,	selecting COMIDA2 results # 2 of 9			
For Julian Day 44,	selecting COMIDA2 results # 2 of 9			
For Julian Day 46,	selecting COMIDA2 results # 2 of 9			
For Julian Day 47,	selecting COMIDA2 results # 2 of 9			
For Julian Day 47,	selecting COMIDA2 results # 2 of 9			
For Julian Day 48,	selecting COMIDA2 results # 2 of 9			
For Julian Day 48,	selecting COMIDA2 results # 2 of 9			
For Julian Day 53,	selecting COMIDA2 results # 2 of 9			
For Julian Day 53,	selecting COMIDA2 results # 2 of 9			
For Julian Day 55,	selecting COMIDA2 results # 2 of 9			



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.1-184 of 1.1-373

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-185 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 98,	selecting	COMIDA2	results # 3 of 9
For Julian Day 99,	selecting	COMIDA2	results # 3 of 9
For Julian Day 99,	selecting	COMIDA2	results # 3 of 9
For Julian Day 100,	selecting	COMIDA2	results # 3 of 9
For Julian Day 100,	selecting	COMIDA2	results # 3 of 9
For Julian Day 102,	selecting	COMIDA2	results # 3 of 9
For Julian Day 102,	selecting	COMIDA2	results # 3 of 9
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9
For Julian Day 107,	selecting	COMIDA2	results # 3 of 9
For Julian Day 107,	selecting	COMIDA2	results # 3 of 9
For Julian Day 109,	selecting	COMIDA2	results # 3 of 9
For Julian Day 110,	selecting	COMIDA2	results # 3 of 9
For Julian Day 110,	selecting	COMIDA2	results # 3 of 9
For Julian Day 112,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 116,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 123,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 127,	selecting	COMIDA2	results # 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-188 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 169,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 169,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 169,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 169,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 173,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 174,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 174,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 174,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 174,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 177,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 177,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 177,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 180,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 180,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 180,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 183,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 183,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 183,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 183,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 185,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 186,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 186,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 187,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 187,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 187,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 189,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 190,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 190,	selecting COMIDA2 results # 5 of 9	results # 5 of 9
For Julian Day 194,	selecting COMIDA2 results # 6 of 9	results # 6 of 9
For Julian Day 194,	selecting COMIDA2 results # 6 of 9	results # 6 of 9
For Julian Day 194,	selecting COMIDA2 results # 6 of 9	results # 6 of 9
For Julian Day 194,	selecting COMIDA2 results # 6 of 9	results # 6 of 9
For Julian Day 196,	selecting COMIDA2 results # 6 of 9	results # 6 of 9
For Julian Day 196,	selecting COMIDA2 results # 6 of 9	results # 6 of 9
For Julian Day 198,	selecting COMIDA2 results # 6 of 9	results # 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-189 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 200,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-192 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 297,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 301,	selecting	COMIDA2	results # 9 of 9
For Julian Day 302,	selecting	COMIDA2	results # 9 of 9
For Julian Day 304,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 313,	selecting	COMIDA2	results # 9 of 9
For Julian Day 314,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 317,	selecting	COMIDA2	results # 9 of 9
For Julian Day 318,	selecting	COMIDA2	results # 9 of 9
For Julian Day 321,	selecting	COMIDA2	results # 9 of 9
For Julian Day 323,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 325,	selecting	COMIDA2	results # 9 of 9
For Julian Day 325,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 327,	selecting	COMIDA2	results # 9 of 9
For Julian Day 327,	selecting	COMIDA2	results # 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222
Rev. 2
Page 1.1-193 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-194 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-195 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 48,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3	of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3	of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-196 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 96,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 97,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 97,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 98,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 98,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 98,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 99,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 99,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 100,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 100,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 102,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 102,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 104,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 104,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 104,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 105,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 105,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 105,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 107,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 107,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 109,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 110,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 110,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 112,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 116,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 117,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 117,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 123,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	



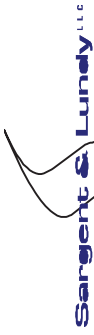
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.1-197 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page 1.1-201 of 1.1-373		

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

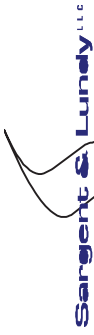
	Safety Related	X	Non-Safety Related							
L-EDEWBODY 05 224	TOT LIF	0.4955	9.02E-04	0.00E+00	2.65E-03	5.18E-03	1.15E-02	1.44E-02	2.03E-01	2.04E-
L-EDEWBODY 04 249	TOT LIF	1.0000	7.42E+00	3.94E+00	1.96E+01	2.42E+01	3.46E+01	3.87E+01	5.59E+01	1.52E-

POPULATION WEIGHTED RISK

ERL FAT/TOTAL	0.00E+00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0.00E+00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0.00E+00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0.00E+00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0.00E+00	0.0000	4.11E-08	2.18E-08	1.05E-07	1.26E-07	1.90E-07	2.10E-07	3.05E-07	1.52E-
CAN FAT/TOTAL	0.00E+00	0.4955	6.95E-10	0.00E+00	2.11E-09	3.74E-09	8.91E-09	1.15E-08	1.55E-07	2.04E-

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 02 10	0-1.6 km	0.9050	1.21E-04	1.04E-04	2.49E-04	3.16E-04	NOT-FOUND	NOT-FOUND	5.02E-04	1.22E-
---------------------	----------	--------	----------	----------	----------	----------	-----------	-----------	----------	--------



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.1-203 of 1.1-373		

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related								
L-EDEWBODY 04 217	TOT LIF	0-16.1 km	1.0000	6.33E-01	3.10E-01	1.52E+00	2.22E+00	4.48E+00	5.80E+00	1.46E+01	1.79E-
L-EDEWBODY 04 249	TOT LIF	0-80.5 km	1.0000	8.05E+00	4.54E+00	2.05E+01	2.52E+01	3.54E+01	3.96E+01	5.62E+01	1.52E-

POPULATION WEIGHTED RISK

ERL FAT/TOTAL	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0	0-80.5 km	1.0000	4.47E-08	2.51E-08	1.09E-07	1.30E-07	1.98E-07	2.26E-07	3.06E-07	1.52E-
CAN FAT/TOTAL	0	0-16.1 km	1.0000	4.77E-07	2.36E-07	1.14E-06	1.63E-06	3.49E-06	4.44E-06	1.09E-05	1.79E-

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 04 211	0-1.6 km	1.0000	6.86E-03	6.68E-03	9.98E-03	1.21E-02	1.88E-02	2.16E-02	2.84E-02	8.75E-
----------------------	----------	--------	----------	----------	----------	----------	----------	----------	----------	--------



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.1-204 of 1.1-373		

Client	PSEG Nuclear Development	Prepared by	
Project	PSEG ESPA	Reviewed by	
Proj. No	12380-001	Approved by	
	Equip. No.	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

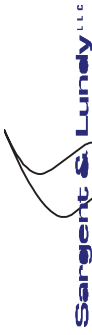
SOURCE TERM 1 OF 10:
NCL

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:33:53	PAGE	4	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	PEAK	PEAK
QUANTILES												
TRIAL												
HEALTH EFFECTS CASES												
CAN FAT/TOTAL	0-80.5 km	1.0000	6.37E+00	3.94E+00	1.41E+01	1.86E+01	2.75E+01	3.19E+01	5.29E+01	4.85E-		
04 85												
CAN FAT/TOTAL	0-16.1 km	1.0000	5.87E-01	3.71E-01	1.28E+00	1.75E+00	3.42E+00	4.44E+00	1.04E+01	4.38E-		
04 175												
POPULATION DOSE (Sv)												
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	1.30E+01	8.27E+00	3.02E+01	3.94E+01	7.67E+01	9.88E+01	2.35E+02	4.38E-		
04 175												
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.43E+02	8.75E+01	3.37E+02	4.18E+02	6.11E+02	6.99E+02	1.19E+03	4.85E-		
04 85												
POPULATION WEIGHTED RISK												
CAN FAT/TOTAL	0-80.5 km	1.0000	6.94E-07	3.77E-07	1.70E-06	2.20E-06	3.18E-06	3.60E-06	6.24E-06	4.85E-		
04 85												
CAN FAT/TOTAL	0-16.1 km	1.0000	7.31E-06	3.52E-06	1.82E-05	2.55E-05	5.28E-05	6.87E-05	1.69E-04	4.38E-		
04 175												

PEAK DOSE FOUND ON SPATIAL GRID (SV)



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related	Rev. 2	Date
			Page 1.1-205 of 1.1-373	
Client PSEG Nuclear Development				
Project PSEG ESPA				
Proj. No 12380-001 Equip. No.				

L-EDEWBODY 04 78	0-1.6 km	1.0000	3.50E-02	3.15E-02	5.17E-02	5.33E-02	5.74E-02	5.93E-02	6.80E-02	2.47E-
L-EDEWBODY POP. DOSE (Sv)	0-16.1 km									
TOTAL LONG-TERM PATHWAYS DOSE 04 175		1.0000	1.30E+01	8.27E+00	3.02E+01	3.94E+01	7.67E+01	9.88E+01	2.35E+02	4.38E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 175		1.0000	1.01E+01	4.91E+00	2.49E+01	3.55E+01	7.30E+01	9.61E+01	2.33E+02	4.38E-
TOTAL INGESTION PATHWAYS DOSE 04 59		1.0000	2.91E+00	2.14E+00	6.70E+00	8.01E+00	1.14E+01	1.31E+01	1.93E+01	7.52E-
LONG-TERM GROUNDSHINE DOSE 04 175		1.0000	1.00E+01	4.88E+00	2.48E+01	3.53E+01	7.29E+01	9.59E+01	2.32E+02	4.38E-
LONG-TERM RESUSPENSION DOSE 04 175		1.0000	6.05E-02	2.93E-02	1.45E-01	2.13E-01	4.50E-01	5.85E-01	1.40E+00	4.38E-
WATER INGESTION DOSE 04 175		0.9945	3.52E-02	2.30E-02	8.00E-02	1.14E-01	2.05E-01	2.46E-01	5.56E-01	1.52E-
POP.-DEPENDENT DECONTAMINATION DOSE 0.00E+00		0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FARM-DEPENDENT DECONTAMINATION DOSE 05 25		0.7263	1.85E-04	4.30E-06	3.85E-04	5.24E-04	5.22E-03	5.67E-03	8.55E-03	2.22E-
INGESTION OF GRAINS 04 59		1.0000	1.17E-01	3.12E-02	3.23E-01	4.00E-01	5.77E-01	6.46E-01	9.66E-01	7.52E-
INGESTION OF LEAF VEG 05 163		1.0000	1.59E-01	4.02E-02	4.20E-01	5.29E-01	7.39E-01	8.41E-01	1.69E+00	1.28E-
INGESTION OF ROOT CROPS 04 59		1.0000	1.55E-01	3.74E-02	4.27E-01	5.43E-01	7.78E-01	8.81E-01	1.26E+00	7.52E-
INGESTION OF FRUITS 04 59		1.0000	2.33E-01	5.63E-02	6.53E-01	8.07E-01	1.16E+00	1.32E+00	1.87E+00	7.52E-
INGESTION OF LEGUMES 04 59		1.0000	1.33E-01	3.32E-02	3.61E-01	4.60E-01	6.49E-01	7.44E-01	1.08E+00	7.52E-
INGESTION OF BEEF 04 59		1.0000	7.23E-01	5.29E-01	1.47E+00	1.94E+00	3.16E+00	3.67E+00	5.59E+00	7.52E-
INGESTION OF MILK 05 75		1.0000	1.03E+00	6.47E-01	2.41E+00	3.01E+00	3.88E+00	4.33E+00	7.12E+00	1.43E-



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	Rev. 2 Date
			Page 1.1-206 of 1.1-373
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

INGESTION OF POULTRY 05 163	1.0000	2.78E-01	1.90E-01	6.26E-01	7.70E-01	1.07E+00	1.17E+00	2.44E+00	1.28E-
INGESTION OF OTHER MEAT CROPS 05 163	1.0000	4.37E-02	3.42E-02	9.01E-02	1.09E-01	1.56E-01	1.81E-01	3.54E-01	1.28E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 85	1.0000	1.43E+02	8.75E+01	3.37E+02	4.18E+02	6.11E+02	6.99E+02	1.19E+03	4.85E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 85	1.0000	1.28E+02	6.93E+01	3.24E+02	3.95E+02	5.90E+02	6.82E+02	1.15E+03	4.85E-
TOTAL INGESTION PATHWAYS DOSE 04 85	1.0000	1.47E+01	9.09E+00	3.48E+01	4.37E+01	6.07E+01	6.80E+01	1.02E+02	3.42E-
LONG-TERM GROUNDSHINE DOSE 04 85	1.0000	1.27E+02	6.90E+01	3.23E+02	3.94E+02	5.89E+02	6.82E+02	1.14E+03	4.85E-
LONG-TERM RESUSPENSION DOSE 04 85	1.0000	7.67E-01	4.14E-01	1.99E+00	2.41E+00	3.50E+00	4.01E+00	6.90E+00	4.85E-
WATER INGESTION DOSE 04 175	1.0000	9.53E-02	6.51E-02	2.02E-01	2.66E-01	3.78E-01	4.27E-01	6.61E-01	1.52E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-210 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

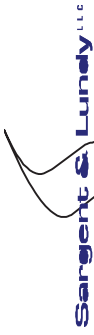
MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 6

SOURCE TERM 1 OF 10:
NCL

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

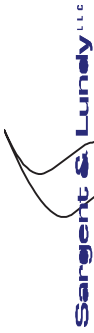
PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	PROB>=X	X	PROB>=X
1.00E-08	1.00E-11	1.00E-09	1.00E-08
2.00E-08	1.00E+00	2.00E-09	2.00E-08
3.00E-08	1.00E+00	3.00E-09	3.00E-08
5.00E-08	1.00E+00	5.00E-09	5.00E-08
7.00E-08	1.00E+00	7.00E-09	7.00E-08
1.00E-07	1.00E+00	1.00E-08	1.00E-07
2.00E-07	1.00E+00	2.00E-08	2.00E-07
3.00E-07	1.00E+00	3.00E-08	3.00E-07
5.00E-07	1.00E+00	5.00E-08	5.00E-07
7.00E-07	1.00E+00	7.00E-08	7.00E-07
1.00E-06	1.00E+00	1.00E-07	1.00E-06
2.00E-06	1.00E+00	2.00E-07	2.00E-06
3.00E-06	1.00E+00	3.00E-07	3.00E-06
5.00E-06	1.00E+00	5.00E-07	5.00E-06
7.00E-06	1.00E+00	7.00E-07	7.00E-06
1.00E-05	1.00E+00	1.00E-06	1.00E-05
2.00E-05	1.00E+00	2.00E-06	2.00E-05
3.00E-05	1.00E+00	3.00E-06	3.00E-05
5.00E-05	1.00E+00	5.00E-06	5.00E-05
7.00E-05	9.99E-01	7.00E-06	7.00E-05
1.00E-04	9.93E-01	1.00E-05	1.00E-04
2.00E-04	9.71E-01	2.00E-05	2.00E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

L-EDEWBODY 05 338	TOT LIF	0-16.1 km	0.6018	5.38E-01	7.61E-03	1.53E+00	2.81E+00	7.58E+00	1.08E+01	5.06E+01	4.09E-
L-EDEWBODY 04 345	TOT LIF	0-80.5 km	1.0000	7.78E+01	3.78E+01	2.01E+02	2.68E+02	4.87E+02	5.66E+02	1.33E+03	1.33E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	04 345	0-80.5 km	1.0000	3.96E-07	2.01E-07	1.01E-06	1.32E-06	2.27E-06	2.71E-06	6.68E-06	1.33E-
CAN FAT/TOTAL	05 338	0-16.1 km	0.6018	3.72E-07	5.25E-09	1.03E-06	1.99E-06	5.13E-06	7.41E-06	3.51E-05	4.09E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY	03 251	0-1.6 km	0.9959	3.89E-02	3.48E-02	6.17E-02	7.04E-02	8.20E-02	8.76E-02	9.20E-02	2.97E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 04 294	0-16.1 km	1.0000	5.39E+00	2.37E+00	1.29E+01	1.92E+01	4.77E+01	5.94E+01	1.89E+02	1.36E-
L-EDEWBODY TOT LIF 04 345	0-80.5 km	1.0000	8.26E+01	4.23E+01	2.08E+02	2.86E+02	5.02E+02	5.83E+02	1.34E+03	1.33E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 345	0-80.5 km	1.0000	4.21E-07	2.19E-07	1.06E-06	1.38E-06	2.34E-06	2.79E-06	6.77E-06	1.33E-
CAN FAT/TOTAL 04 294	0-16.1 km	1.0000	3.72E-06	1.56E-06	8.99E-06	1.32E-05	3.22E-05	4.07E-05	1.29E-04	1.36E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 177	0-1.6 km	1.0000	7.53E-02	6.23E-02	1.24E-01	1.44E-01	2.03E-01	2.22E-01	3.15E-01	4.57E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.1-222 of 1.1-373		

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

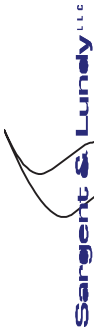
SOURCE TERM 2 OF 10:
Case 1

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:33:53	PAGE 10	PROB	QUANTILES					PEAK	PEAK
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	
TRIAL									
HEALTH EFFECTS CASES									
CAN FAT/TOTAL	0-80.5 km	1.0000	8.09E-02	6.15E-02	1.73E-01	2.18E-01	3.11E-01	3.58E-01	1.21E+00
05 86									1.08E-
CAN FAT/TOTAL	0-16.1 km	1.0000	1.54E-02	9.27E-03	3.78E-02	5.27E-02	8.16E-02	9.61E-02	1.86E-01
05 195									2.26E-
POPULATION DOSE (Sv)									
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	2.68E-01	1.56E-01	6.65E-01	8.86E-01	1.40E+00	1.68E+00	4.19E+00
05 195									2.26E-
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.64E+00	1.13E+00	3.61E+00	4.57E+00	6.65E+00	7.83E+00	2.72E+01
05 86									1.08E-
POPULATION WEIGHTED RISK									
CAN FAT/TOTAL	0-80.5 km	1.0000	6.90E-09	3.76E-09	1.67E-08	2.19E-08	3.30E-08	3.90E-08	1.43E-07
05 86									1.08E-
CAN FAT/TOTAL	0-16.1 km	1.0000	8.37E-08	3.55E-08	2.04E-07	2.96E-07	7.21E-07	8.68E-07	2.98E-06
05 195									2.26E-

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.1-224 of 1.1-373		

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
		Approved by		Date	

INGESTION OF POULTRY 05 176	1.0000	6.47E-03	2.06E-03	1.65E-02	2.57E-02	5.86E-02	7.46E-02	1.47E-01	2.85E-
INGESTION OF OTHER MEAT CROPS 05 176	1.0000	9.36E-03	6.44E-03	1.99E-02	2.77E-02	5.91E-02	7.48E-02	1.53E-01	2.85E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 86	1.0000	1.64E+00	1.13E+00	3.61E+00	4.57E+00	6.65E+00	7.83E+00	2.72E+01	1.08E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 86	1.0000	1.28E+00	7.03E-01	3.21E+00	3.94E+00	6.05E+00	7.14E+00	2.65E+01	1.08E-
TOTAL INGESTION PATHWAYS DOSE 05 162	1.0000	3.63E-01	1.52E-01	9.49E-01	1.10E+00	1.43E+00	1.60E+00	2.64E+00	1.83E-
LONG-TERM GROUNDSHINE DOSE 05 86	1.0000	1.26E+00	6.89E-01	3.18E+00	3.89E+00	5.92E+00	6.95E+00	2.61E+01	1.08E-
LONG-TERM RESUSPENSION DOSE 05 86	1.0000	1.84E-02	1.01E-02	4.60E-02	5.81E-02	8.71E-02	1.02E-01	3.80E-01	1.08E-
WATER INGESTION DOSE 06 86	1.0000	6.13E-04	3.91E-04	1.30E-03	1.81E-03	2.78E-03	3.21E-03	8.60E-03	7.64E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.1-225 of 1.1-373	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

10-JAN-10 17:33:53	PAGE 11	PROB	QUANTILES							PEAK	PEAK			
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH			CONS	PROB	
TRIAL														
L-EDEMBODY POP. DOSE (Sv)	0-80.5 km													
POP.-DEPENDENT DECONTAMINATION DOSE	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FARM-DEPENDENT DECONTAMINATION DOSE	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0	1.0000	6.88E-03	2.50E-03	1.97E-02	2.35E-02	3.21E-02	3.47E-02	5.82E-02	1.83E-				
INGESTION OF GRAINS	05 162	1.0000	1.20E-02	3.12E-03	2.85E-02	4.40E-02	1.09E-01	1.20E-01	2.39E-01	1.83E-				
INGESTION OF LEAF VEG	05 162	1.0000	7.70E-03	2.86E-03	2.15E-02	2.53E-02	3.36E-02	3.66E-02	6.00E-02	1.83E-				
INGESTION OF ROOT CROPS	05 162	1.0000	1.34E-02	4.98E-03	3.57E-02	4.39E-02	6.09E-02	6.85E-02	1.12E-01	1.83E-				
INGESTION OF FRUITS	05 162	1.0000	7.72E-03	2.89E-03	2.15E-02	2.56E-02	3.47E-02	3.85E-02	6.46E-02	1.83E-				
INGESTION OF LEGUMES	05 162	1.0000	2.30E-01	9.22E-02	6.04E-01	7.32E-01	9.76E-01	1.05E+00	1.71E+00	1.83E-				
INGESTION OF BEEF	05 86	1.0000	4.78E-02	2.19E-02	1.15E-01	1.35E-01	1.96E-01	2.13E-01	3.22E-01	1.83E-				
INGESTION OF MILK	05 86	1.0000	1.53E-02	5.47E-03	3.56E-02	4.92E-02	1.08E-01	1.19E-01	2.32E-01	1.83E-				
INGESTION OF POULTRY	05 162	1.0000	2.15E-02	1.59E-02	3.74E-02	4.88E-02	1.10E-01	1.21E-01	2.42E-01	1.83E-				
INGESTION OF OTHER MEAT CROPS	05 162													
ECONOMIC COST MEASURES (\$)	0-80.5 km													
TOTAL ECONOMIC COSTS	04 327	0.7840	7.10E+05	2.10E+04	1.15E+06	2.51E+06	1.03E+07	2.14E+07	7.00E+07	1.90E-				
POP.-DEPENDENT COSTS	04 175	0.6550	6.92E+05	4.57E+03	1.11E+06	2.48E+06	1.01E+07	2.14E+07	6.97E+07	8.87E-				
FARM-DEPENDENT COSTS	05 80	0.4672	1.86E+04	0.00E+00	7.63E+04	8.48E+04	3.16E+05	3.59E+05	7.22E+05	3.74E-				



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-228 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

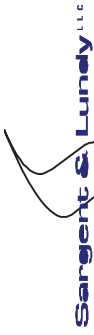
MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 12

SOURCE TERM 2 OF 10:
Case 1

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	1.00E-08	1.00E-07	1.00E-09
2.00E-08	2.00E-08	2.00E-07	2.00E-09
3.00E-08	3.00E-08	3.00E-07	3.00E-09
5.00E-08	5.00E-08	5.00E-07	5.00E-09
7.00E-08	7.00E-08	7.00E-07	7.00E-09
1.00E-07	1.00E-07	1.00E-06	1.00E-08
2.00E-07	2.00E-07	2.00E-06	2.00E-08
3.00E-07	3.00E-07	3.00E-06	3.00E-08
5.00E-07	5.00E-07	5.00E-06	5.00E-08
7.00E-07	7.00E-07	7.00E-06	7.00E-08
1.00E-06	1.00E-06	1.00E-05	1.00E-07
2.00E-06	2.00E-06	2.00E-05	2.00E-07
3.00E-06	3.00E-06	3.00E-05	3.00E-07
5.00E-06	5.00E-06	5.00E-05	5.00E-07
7.00E-06	7.00E-06	7.00E-05	7.00E-07
1.00E-05	1.00E-05	1.00E-04	1.00E-06
2.00E-05	2.00E-05	2.00E-04	2.00E-06
3.00E-05	3.00E-05	3.00E-04	3.00E-06
5.00E-05	5.00E-05	5.00E-04	5.00E-06
7.00E-05	7.00E-05	7.00E-04	7.00E-06
1.00E-04	1.00E-04	1.00E-03	1.00E-05
2.00E-04	2.00E-04	2.00E-03	2.00E-05
3.00E-04	3.00E-04	3.00E-03	3.00E-05
5.00E-04	5.00E-04	5.00E-03	5.00E-05
7.00E-04	7.00E-04	7.00E-03	7.00E-05
1.00E-03	1.00E-03	1.00E-02	1.00E-04
2.00E-03	2.00E-03	2.00E-02	2.00E-04
3.00E-03	3.00E-03	3.00E-02	3.00E-04
5.00E-03	5.00E-03	5.00E-02	5.00E-04
7.00E-03	7.00E-03	7.00E-02	7.00E-04
1.00E-02	1.00E-02	1.00E-01	1.00E-03
2.00E-02	2.00E-02	2.00E-01	2.00E-03
3.00E-02	3.00E-02	3.00E-01	3.00E-03
5.00E-02	5.00E-02	5.00E-01	5.00E-03
7.00E-02	7.00E-02	7.00E-01	7.00E-03
1.00E-01	1.00E-01	1.00E+00	1.00E-02
2.00E-01	2.00E-01	2.00E+00	2.00E-02
3.00E-01	3.00E-01	3.00E+00	3.00E-02
5.00E-01	5.00E-01	5.00E+00	5.00E-02
7.00E-01	7.00E-01	7.00E+00	7.00E-02
1.00E+00	1.00E+00	1.00E+00	1.00E-01
2.00E+00	2.00E+00	2.00E+00	2.00E-01
3.00E+00	3.00E+00	3.00E+00	3.00E-01
5.00E+00	5.00E+00	5.00E+00	5.00E-01
7.00E+00	7.00E+00	7.00E+00	7.00E-01
1.00E+01	1.00E+01	1.00E+00	1.00E-00
2.00E+01	2.00E+01	2.00E+00	2.00E-00
3.00E+01	3.00E+01	3.00E+00	3.00E-00
5.00E+01	5.00E+01	5.00E+00	5.00E-00
7.00E+01	7.00E+01	7.00E+00	7.00E-00
1.00E+02	1.00E+02	1.00E+00	1.00E+00
2.00E+02	2.00E+02	2.00E+00	2.00E+00
3.00E+02	3.00E+02	3.00E+00	3.00E+00
5.00E+02	5.00E+02	5.00E+00	5.00E+00
7.00E+02	7.00E+02	7.00E+00	7.00E+00
1.00E+03	1.00E+03	1.00E+00	1.00E+00
2.00E+03	2.00E+03	2.00E+00	2.00E+00
3.00E+03	3.00E+03	3.00E+00	3.00E+00
5.00E+03	5.00E+03	5.00E+00	5.00E+00
7.00E+03	7.00E+03	7.00E+00	7.00E+00
1.00E+04	1.00E+04	1.00E+00	1.00E+00
2.00E+04	2.00E+04	2.00E+00	2.00E+00
3.00E+04	3.00E+04	3.00E+00	3.00E+00
5.00E+04	5.00E+04	5.00E+00	5.00E+00
7.00E+04	7.00E+04	7.00E+00	7.00E+00
1.00E+05	1.00E+05	1.00E+00	1.00E+00
2.00E+05	2.00E+05	2.00E+00	2.00E+00
3.00E+05	3.00E+05	3.00E+00	3.00E+00
5.00E+05	5.00E+05	5.00E+00	5.00E+00
7.00E+05	7.00E+05	7.00E+00	7.00E+00
1.00E+06	1.00E+06	1.00E+00	1.00E+00
2.00E+06	2.00E+06	2.00E+00	2.00E+00
3.00E+06	3.00E+06	3.00E+00	3.00E+00
5.00E+06	5.00E+06	5.00E+00	5.00E+00
7.00E+06	7.00E+06	7.00E+00	7.00E+00
1.00E+07	1.00E+07	1.00E+00	1.00E+00
2.00E+07	2.00E+07	2.00E+00	2.00E+00
3.00E+07	3.00E+07	3.00E+00	3.00E+00
5.00E+07	5.00E+07	5.00E+00	5.00E+00
7.00E+07	7.00E+07	7.00E+00	7.00E+00
1.00E+08	1.00E+08	1.00E+00	1.00E+00
2.00E+08	2.00E+08	2.00E+00	2.00E+00
3.00E+08	3.00E+08	3.00E+00	3.00E+00
5.00E+08	5.00E+08	5.00E+00	5.00E+00
7.00E+08	7.00E+08	7.00E+00	7.00E+00
1.00E+09	1.00E+09	1.00E+00	1.00E+00
2.00E+09	2.00E+09	2.00E+00	2.00E+00
3.00E+09	3.00E+09	3.00E+00	3.00E+00
5.00E+09	5.00E+09	5.00E+00	5.00E+00
7.00E+09	7.00E+09	7.00E+00	7.00E+00
1.00E+10	1.00E+10	1.00E+00	1.00E+00
2.00E+10	2.00E+10	2.00E+00	2.00E+00
3.00E+10	3.00E+10	3.00E+00	3.00E+00
5.00E+10	5.00E+10	5.00E+00	5.00E+00
7.00E+10	7.00E+10	7.00E+00	7.00E+00



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-237 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

L-EDEWBODY 05 338	TOT LIF	0-16.1 km	0.6018	5.61E-01	8.06E-01	1.59E+00	3.03E+00	7.95E+00	1.14E+01	5.28E+01	4.09E-
L-EDEWBODY 04 345	TOT LIF	0-80.5 km	1.0000	7.91E+01	3.83E+01	2.02E+02	2.75E+02	5.01E+02	5.82E+02	1.35E+03	1.33E-

POPULATION WEIGHTED RISK

ERL FAT/TOTAL 0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 345	0-80.5 km	1.0000	4.04E-07	2.05E-07	1.04E-06	1.36E-06	2.36E-06	2.83E-06	6.82E-06	1.33E-	
CAN FAT/TOTAL 05 338	0-16.1 km	0.6018	3.91E-07	5.50E-09	1.07E-06	2.13E-06	5.41E-06	7.49E-06	3.69E-05	4.09E-	

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 03 251	0-1.6 km	0.9959	4.05E-02	3.62E-02	6.28E-02	7.10E-02	8.42E-02	9.07E-02	9.58E-02	2.97E-	
----------------------	----------	--------	----------	----------	----------	----------	----------	----------	----------	--------	--



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

Rev.	2	Date
Page	1.1-239 of 1.1-373	

L-EDEWBODY 04 294	TOT LIF	0-16.1 km	1.0000	5.55E+00	2.40E+00	1.34E+01	2.02E+01	4.99E+01	6.15E+01	1.94E+02	1.36E-
L-EDEWBODY 04 345	TOT LIF	0-80.5 km	1.0000	8.41E+01	4.33E+01	2.13E+02	2.90E+02	5.03E+02	5.84E+02	1.37E+03	1.33E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0	0-80.5 km	1.0000	4.30E-07	2.24E-07	1.08E-06	1.42E-06	2.43E-06	2.92E-06	6.92E-06	1.33E-
CAN FAT/TOTAL	0	0-16.1 km	1.0000	3.85E-06	1.62E-06	9.32E-06	1.37E-05	3.29E-05	4.13E-05	1.34E-04	1.36E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 04 177		0-1.6 km	1.0000	7.83E-02	6.66E-02	1.32E-01	1.57E-01	2.14E-01	2.31E-01	3.28E-01	4.57E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page		1.1-240 of 1.1-373

Client	PSEG Nuclear Development	Prepared by	
Project	PSEG ESPA	Reviewed by	
Proj. No	12380-001	Approved by	
	Equip. No.	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 3 OF 10:
Case 2

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:33:53	PAGE 16	PROB	QUANTILES					PEAK	PEAK	
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	CONC	PROB
TRIAL										
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.37E+00	8.84E-01	3.22E+00	3.97E+00	6.00E+00	6.95E+00	2.49E+01	1.08E-
05 86										
CAN FAT/TOTAL	0-16.1 km	1.0000	1.63E-01	1.04E-01	3.65E-01	5.00E-01	1.01E+00	1.23E+00	3.86E+00	2.26E-
05 195										
POPULATION DOSE (Sv)										
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	3.57E+00	2.23E+00	8.08E+00	1.12E+01	2.21E+01	2.68E+01	8.74E+01	2.26E-
05 195										
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	3.06E+01	1.95E+01	7.27E+01	8.88E+01	1.34E+02	1.58E+02	5.63E+02	1.08E-
05 86										
POPULATION WEIGHTED RISK										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.46E-07	7.99E-08	3.60E-07	4.59E-07	6.88E-07	8.28E-07	3.01E-06	1.08E-
05 86										
CAN FAT/TOTAL	0-16.1 km	1.0000	1.76E-06	7.71E-07	4.19E-06	6.22E-06	1.39E-05	1.84E-05	6.29E-05	2.26E-
05 195										

PEAK DOSE FOUND ON SPATIAL GRID (Sv)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.1-242 of 1.1-373		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 05 165	1.0000	1.15E-01	5.63E-02	2.94E-01	3.74E-01	6.25E-01	7.53E-01	1.32E+00	1.87E-
INGESTION OF OTHER MEAT CROPS 05 165	1.0000	1.79E-02	1.07E-02	4.24E-02	5.55E-02	8.95E-02	1.04E-01	1.95E-01	1.87E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 86	1.0000	3.06E+01	1.95E+01	7.27E+01	8.88E+01	1.34E+02	1.58E+02	5.63E+02	1.08E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 86	1.0000	2.69E+01	1.45E+01	6.84E+01	8.44E+01	1.27E+02	1.50E+02	5.55E+02	1.08E-
TOTAL INGESTION PATHWAYS DOSE 05 162	1.0000	3.66E+00	1.84E+00	9.09E+00	1.09E+01	1.51E+01	1.74E+01	3.42E+01	1.83E-
LONG-TERM GROUNDSHINE DOSE 05 86	1.0000	2.67E+01	1.43E+01	6.75E+01	8.36E+01	1.25E+02	1.47E+02	5.52E+02	1.08E-
LONG-TERM RESUSPENSION DOSE 05 86	1.0000	1.61E-01	8.76E-02	3.97E-01	5.18E-01	7.70E-01	9.08E-01	3.33E+00	1.08E-
WATER INGESTION DOSE 06 86	1.0000	2.04E-02	1.30E-02	4.46E-02	6.07E-02	9.28E-02	1.07E-01	2.87E-01	7.64E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.1-246 of 1.1-373	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
	Date
	Date
	Date

MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 18

SOURCE TERM 3 OF 10:
Case 2

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1		EMER. RESP. # 2		CHRONC RESULTS		
X	X	X	X	X	X	X	
PROB>=X	PROB>=X	PROB>=X	PROB>=X	PROB>=X	PROB>=X	PROB>=X	
1.00E-07	1.00E+00	1.00E-08	9.96E-01	1.00E-07	1.00E+00	1.00E-08	9.93E-01
2.00E-07	1.00E+00	2.00E-08	9.96E-01	2.00E-07	1.00E+00	2.00E-08	9.89E-01
3.00E-07	1.00E+00	3.00E-08	9.96E-01	3.00E-07	1.00E+00	3.00E-08	9.89E-01
5.00E-07	1.00E+00	5.00E-08	9.96E-01	5.00E-07	1.00E+00	5.00E-08	9.89E-01
7.00E-07	1.00E+00	7.00E-08	9.96E-01	7.00E-07	1.00E+00	7.00E-08	9.89E-01
1.00E-06	1.00E+00	1.00E-07	9.96E-01	1.00E-06	1.00E+00	1.00E-07	9.89E-01
2.00E-06	1.00E+00	2.00E-07	9.96E-01	2.00E-06	1.00E+00	2.00E-07	9.85E-01
3.00E-06	1.00E+00	3.00E-07	9.96E-01	3.00E-06	1.00E+00	3.00E-07	9.85E-01
5.00E-06	1.00E+00	5.00E-07	9.96E-01	5.00E-06	1.00E+00	5.00E-07	9.85E-01
7.00E-06	1.00E+00	7.00E-07	9.96E-01	7.00E-06	1.00E+00	7.00E-07	9.77E-01
1.00E-05	1.00E+00	1.00E-06	9.96E-01	1.00E-05	1.00E+00	1.00E-06	9.77E-01
2.00E-05	1.00E+00	2.00E-06	9.96E-01	2.00E-05	1.00E+00	2.00E-06	9.77E-01
3.00E-05	1.00E+00	3.00E-06	9.96E-01	3.00E-05	1.00E+00	3.00E-06	9.77E-01
5.00E-05	1.00E+00	5.00E-06	9.96E-01	5.00E-05	1.00E+00	5.00E-06	9.77E-01
7.00E-05	1.00E+00	7.00E-06	9.96E-01	7.00E-05	1.00E+00	7.00E-06	9.77E-01
1.00E-04	1.00E+00	1.00E-05	9.96E-01	1.00E-04	1.00E+00	1.00E-05	9.77E-01
2.00E-04	1.00E+00	2.00E-05	9.96E-01	2.00E-04	1.00E+00	2.00E-05	9.77E-01
3.00E-04	1.00E+00	3.00E-05	9.96E-01	3.00E-04	1.00E+00	3.00E-05	9.77E-01
5.00E-04	1.00E+00	5.00E-05	9.96E-01	5.00E-04	1.00E+00	5.00E-05	9.77E-01
7.00E-04	9.99E-01	7.00E-05	9.96E-01	7.00E-04	1.00E+00	7.00E-05	9.77E-01
1.00E-03	9.99E-01	1.00E-04	9.96E-01	1.00E-03	1.00E+00	1.00E-04	9.77E-01
2.00E-03	9.83E-01	2.00E-04	9.96E-01	2.00E-03	9.96E-01	2.00E-04	9.77E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE			2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related	Rev. 2	Date
		Page 1.1-254 of 1.1-373		
Client PSEG Nuclear Development		Prepared by		
Project PSEG ESPA		Reviewed by		
Proj. No 12380-001		Approved by		
Equip. No.		Date		

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 4 OF 10:
 Case 3

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION

10-JAN-10 17:33:53	PAGE 20	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	CONS	PROB	
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.09E+01	5.79E+00	2.90E+01	3.49E+01	5.10E+01	5.74E+01	8.06E+01	4.85E-
04 85	0-16.1 km	0.5919	1.53E-03	1.60E-05	4.16E-03	8.60E-03	2.13E-02	2.74E-02	2.39E-01	2.04E-
05 224	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00									
EARLY dose L-EDEWBODY > 0.250 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00									

POPULATION DOSE (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

Rev.	2	Date	
Page	1.1-255 of 1.1-373		

L-EDEWBODY 05 224	TOT LIF	0-16.1 km	0.5919	3.26E-02	3.72E-04	8.89E-02	1.76E-01	4.14E-01	5.73E-01	5.25E+00	2.04E-
L-EDEWBODY 04 85	TOT LIF	0-80.5 km	1.0000	2.41E+02	1.25E+02	6.31E+02	7.89E+02	1.12E+03	1.25E+03	1.81E+03	4.85E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL		0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL		0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL		0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL		3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL		0-80.5 km	1.0000	1.34E-06	7.02E-07	3.43E-06	4.34E-06	6.28E-06	7.13E-06	9.90E-06	4.85E-
CAN FAT/TOTAL		0-16.1 km	0.5919	2.51E-08	2.78E-10	6.68E-08	1.38E-07	3.55E-07	4.57E-07	3.93E-06	2.04E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 02 139		0-1.6 km	0.9959	3.10E-03	2.65E-03	5.65E-03	7.01E-03	NOT-FOUND	NOT-FOUND	8.45E-03	1.22E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

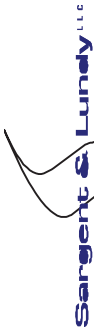
SOURCE TERM 4 OF 10:
 Case 3

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:33:53	PAGE 22	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PROB
TRIAL										
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	7.34E+01	4.19E+01	1.77E+02	2.26E+02	3.28E+02	3.69E+02	6.44E+02	4.85E-
04 85										
CAN FAT/TOTAL	0-16.1 km	1.0000	4.73E+00	2.65E+00	1.14E+01	1.55E+01	3.09E+01	3.62E+01	6.08E+01	2.04E-
05 165										
POPULATION DOSE (Sv)										
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	1.07E+02	5.98E+01	2.61E+02	3.53E+02	7.15E+02	8.89E+02	1.38E+03	2.04E-
05 165										
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.65E+03	9.39E+02	4.05E+03	5.25E+03	7.63E+03	9.03E+03	1.46E+04	4.85E-
04 85										
POPULATION WEIGHTED RISK										
CAN FAT/TOTAL	0-80.5 km	1.0000	8.57E-06	4.56E-06	2.20E-05	2.76E-05	4.12E-05	4.85E-05	7.83E-05	4.85E-
04 85										
CAN FAT/TOTAL	0-16.1 km	1.0000	7.31E-05	3.78E-05	1.83E-04	2.53E-04	5.12E-04	6.47E-04	9.95E-04	2.04E-
05 165										

PEAK DOSE FOUND ON SPATIAL GRID (SV)



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page 1.1-260 of 1.1-373		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 05 158	1.0000	4.34E-01	3.27E-01	9.18E-01	1.16E+00	1.87E+00	2.07E+00	3.06E+00	2.06E-
INGESTION OF OTHER MEAT CROPS 05 200	1.0000	1.26E-01	8.78E-02	2.78E-01	3.81E-01	6.41E-01	7.20E-01	1.15E+00	1.47E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 85	1.0000	1.65E+03	9.39E+02	4.05E+03	5.25E+03	7.63E+03	9.03E+03	1.46E+04	4.85E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 85	1.0000	1.58E+03	8.59E+02	3.94E+03	5.14E+03	7.47E+03	8.73E+03	1.44E+04	4.85E-
TOTAL INGESTION PATHWAYS DOSE 04 59	1.0000	7.09E+01	5.32E+01	1.48E+02	2.00E+02	2.74E+02	3.10E+02	4.61E+02	3.42E-
LONG-TERM GROUNDSHINE DOSE 04 85	1.0000	1.57E+03	8.55E+02	3.92E+03	5.13E+03	7.39E+03	8.43E+03	1.43E+04	4.85E-
LONG-TERM RESUSPENSION DOSE 04 85	1.0000	1.11E+01	5.99E+00	2.81E+01	3.47E+01	5.24E+01	6.12E+01	1.01E+02	4.85E-
WATER INGESTION DOSE 04 175	1.0000	1.16E+00	8.06E-01	2.44E+00	3.23E+00	5.02E+00	5.38E+00	8.04E+00	1.52E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

Page	1.1-263	of	1.1-373
------	---------	----	---------

MILK DISPOSAL AREA (HECTARES)	0.9713	4.16E+03	1.62E+03	1.06E+03	1.49E+04	2.34E+04	2.61E+04	4.72E+04	7.34E+04
CROP DISPOSAL AREA (HECTARES)	0.9933	1.32E+04	7.59E+03	3.07E+04	4.18E+04	7.16E+04	7.54E+04	9.17E+04	3.42E+04

04 30
04 59



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No.	2009-11222	
Rev.	2	Date
Page	1.1-264 of 1.1-373	

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 24

SOURCE TERM 4 OF 10:
Case 3

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	1.00E-09	1.00E-08	1.00E-08
2.00E-08	1.00E+00	2.00E-09	2.00E-08
3.00E-08	1.00E+00	3.00E-09	3.00E-08
5.00E-08	1.00E+00	5.00E-09	5.00E-08
7.00E-08	1.00E+00	7.00E-09	7.00E-08
1.00E-07	1.00E+00	1.00E-08	1.00E-07
2.00E-07	1.00E+00	2.00E-08	2.00E-07
3.00E-07	1.00E+00	3.00E-08	3.00E-07
5.00E-07	1.00E+00	5.00E-08	5.00E-07
7.00E-07	1.00E+00	7.00E-08	7.00E-07
1.00E-06	1.00E+00	1.00E-07	1.00E-06
2.00E-06	1.00E+00	2.00E-07	2.00E-06
3.00E-06	1.00E+00	3.00E-07	3.00E-06
5.00E-06	1.00E+00	5.00E-07	5.00E-06
7.00E-06	1.00E+00	7.00E-07	7.00E-06
1.00E-05	1.00E+00	1.00E-06	1.00E-05
2.00E-05	1.00E+00	2.00E-06	2.00E-05
3.00E-05	1.00E+00	3.00E-06	3.00E-05
5.00E-05	1.00E+00	5.00E-06	5.00E-05
7.00E-05	1.00E+00	7.00E-06	7.00E-05
1.00E-04	1.00E+00	1.00E-05	1.00E-04
2.00E-04	1.00E+00	2.00E-05	2.00E-04
3.00E-04	1.00E+00	3.00E-05	3.00E-04
5.00E-04	1.00E+00	5.00E-05	5.00E-04
7.00E-04	1.00E+00	7.00E-05	7.00E-04
1.00E-03	1.00E+00	1.00E-04	1.00E-03
2.00E-03	1.00E+00	2.00E-04	2.00E-03
3.00E-03	1.00E+00	3.00E-04	3.00E-03
5.00E-03	1.00E+00	5.00E-04	5.00E-03
7.00E-03	1.00E+00	7.00E-04	7.00E-03
1.00E-02	1.00E+00	1.00E-03	1.00E-02
2.00E-02	1.00E+00	2.00E-03	2.00E-02
3.00E-02	1.00E+00	3.00E-03	3.00E-02
5.00E-02	1.00E+00	5.00E-03	5.00E-02
7.00E-02	1.00E+00	7.00E-03	7.00E-02
1.00E-01	1.00E+00	1.00E-02	1.00E-01
2.00E-01	1.00E+00	2.00E-02	2.00E-01
3.00E-01	1.00E+00	3.00E-02	3.00E-01
5.00E-01	1.00E+00	5.00E-02	5.00E-01
7.00E-01	1.00E+00	7.00E-02	7.00E-01
1.00E+00	1.00E+00	1.00E-01	1.00E+00
2.00E+00	1.00E+00	2.00E-01	2.00E+00
3.00E+00	1.00E+00	3.00E-01	3.00E+00
5.00E+00	1.00E+00	5.00E-01	5.00E+00
7.00E+00	1.00E+00	7.00E-01	7.00E+00
1.00E+01	1.00E+00	1.00E-00	1.00E+01
2.00E+01	1.00E+00	2.00E-00	2.00E+01
3.00E+01	1.00E+00	3.00E-00	3.00E+01
5.00E+01	1.00E+00	5.00E-00	5.00E+01
7.00E+01	1.00E+00	7.00E-00	7.00E+01
1.00E+02	1.00E+00	1.00E+00	1.00E+02
2.00E+02	1.00E+00	2.00E+00	2.00E+02
3.00E+02	1.00E+00	3.00E+00	3.00E+02
5.00E+02	1.00E+00	5.00E+00	5.00E+02
7.00E+02	1.00E+00	7.00E+00	7.00E+02
1.00E+03	1.00E+00	1.00E+01	1.00E+03
2.00E+03	1.00E+00	2.00E+01	2.00E+03
3.00E+03	1.00E+00	3.00E+01	3.00E+03
5.00E+03	1.00E+00	5.00E+01	5.00E+03
7.00E+03	1.00E+00	7.00E+01	7.00E+03
1.00E+04	1.00E+00	1.00E+02	1.00E+04
2.00E+04	1.00E+00	2.00E+02	2.00E+04
3.00E+04	1.00E+00	3.00E+02	3.00E+04
5.00E+04	1.00E+00	5.00E+02	5.00E+04
7.00E+04	1.00E+00	7.00E+02	7.00E+04
1.00E+05	1.00E+00	1.00E+03	1.00E+05
2.00E+05	1.00E+00	2.00E+03	2.00E+05
3.00E+05	1.00E+00	3.00E+03	3.00E+05
5.00E+05	1.00E+00	5.00E+03	5.00E+05
7.00E+05	1.00E+00	7.00E+03	7.00E+05
1.00E+06	1.00E+00	1.00E+04	1.00E+06
2.00E+06	1.00E+00	2.00E+04	2.00E+06
3.00E+06	1.00E+00	3.00E+04	3.00E+06
5.00E+06	1.00E+00	5.00E+04	5.00E+06
7.00E+06	1.00E+00	7.00E+04	7.00E+06
1.00E+07	1.00E+00	1.00E+05	1.00E+07
2.00E+07	1.00E+00	2.00E+05	2.00E+07
3.00E+07	1.00E+00	3.00E+05	3.00E+07
5.00E+07	1.00E+00	5.00E+05	5.00E+07
7.00E+07	1.00E+00	7.00E+05	7.00E+07
1.00E+08	1.00E+00	1.00E+06	1.00E+08
2.00E+08	1.00E+00	2.00E+06	2.00E+08
3.00E+08	1.00E+00	3.00E+06	3.00E+08
5.00E+08	1.00E+00	5.00E+06	5.00E+08
7.00E+08	1.00E+00	7.00E+06	7.00E+08
1.00E+09	1.00E+00	1.00E+07	1.00E+09
2.00E+09	1.00E+00	2.00E+07	2.00E+09
3.00E+09	1.00E+00	3.00E+07	3.00E+09
5.00E+09	1.00E+00	5.00E+07	5.00E+09
7.00E+09	1.00E+00	7.00E+07	7.00E+09
1.00E+10	1.00E+00	1.00E+08	1.00E+10
2.00E+10	1.00E+00	2.00E+08	2.00E+10
3.00E+10	1.00E+00	3.00E+08	3.00E+10
5.00E+10	1.00E+00	5.00E+08	5.00E+10
7.00E+10	1.00E+00	7.00E+08	7.00E+10
1.00E+11	1.00E+00	1.00E+09	1.00E+11
2.00E+11	1.00E+00	2.00E+09	2.00E+11
3.00E+11	1.00E+00	3.00E+09	3.00E+11
5.00E+11	1.00E+00	5.00E+09	5.00E+11
7.00E+11	1.00E+00	7.00E+09	7.00E+11
1.00E+12	1.00E+00	1.00E+10	1.00E+12
2.00E+12	1.00E+00	2.00E+10	2.00E+12
3.00E+12	1.00E+00	3.00E+10	3.00E+12
5.00E+12	1.00E+00	5.00E+10	5.00E+12
7.00E+12	1.00E+00	7.00E+10	7.00E+12
1.00E+13	1.00E+00	1.00E+11	1.00E+13
2.00E+13	1.00E+00	2.00E+11	2.00E+13
3.00E+13	1.00E+00	3.00E+11	3.00E+13
5.00E+13	1.00E+00	5.00E+11	5.00E+13
7.00E+13	1.00E+00	7.00E+11	7.00E+13
1.00E+14	1.00E+00	1.00E+12	1.00E+14
2.00E+14	1.00E+00	2.00E+12	2.00E+14
3.00E+14	1.00E+00	3.00E+12	3.00E+14
5.00E+14	1.00E+00	5.00E+12	5.00E+14
7.00E+14	1.00E+00	7.00E+12	7.00E+14
1.00E+15	1.00E+00	1.00E+13	1.00E+15
2.00E+15	1.00E+00	2.00E+13	2.00E+15
3.00E+15	1.00E+00	3.00E+13	3.00E+15
5.00E+15	1.00E+00	5.00E+13	5.00E+15
7.00E+15	1.00E+00	7.00E+13	7.00E+15
1.00E+16	1.00E+00	1.00E+14	1.00E+16
2.00E+16	1.00E+00	2.00E+14	2.00E+16
3.00E+16	1.00E+00	3.00E+14	3.00E+16
5.00E+16	1.00E+00	5.00E+14	5.00E+16
7.00E+16	1.00E+00	7.00E+14	7.00E+16
1.00E+17	1.00E+00	1.00E+15	1.00E+17
2.00E+17	1.00E+00	2.00E+15	2.00E+17
3.00E+17	1.00E+00	3.00E+15	3.00E+17
5.00E+17	1.00E+00	5.00E+15	5.00E+17
7.00E+17	1.00E+00	7.00E+15	7.00E+17
1.00E+18	1.00E+00	1.00E+16	1.00E+18
2.00E+18	1.00E+00	2.00E+16	2.00E+18
3.00E+18	1.00E+00	3.00E+16	3.00E+18
5.00E+18	1.00E+00	5.00E+16	5.00E+18
7.00E+18	1.00E+00	7.00E+16	7.00E+18
1.00E+19	1.00E+00	1.00E+17	1.00E+19
2.00E+19	1.00E+00	2.00E+17	2.00E+19
3.00E+19	1.00E+00	3.00E+17	3.00E+19
5.00E+19	1.00E+00	5.00E+17	5.00E+19
7.00E+19	1.00E+00	7.00E+17	7.00E+19
1.00E+20	1.00E+00	1.00E+18	1.00E+20
2.00E+20	1.00E+00	2.00E+18	2.00E+20
3.00E+20	1.00E+00	3.00E+18	3.00E+20
5.00E+20	1.00E+00	5.00E+18	5.00E+20
7.00E+20	1.00E+00	7.00E+18	7.00E+20

**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	Safety Related	X Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

ERL FAT/TOTAL	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
POPULATION EXCEEDING DOSE														
EARLY dose	0	L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EARLY dose	0	L-EDEWBODY > 0.250 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
POPULATION DOSE (Sv)														
L-EDEWBODY	06	TOT LIF	1.0000	1.14E+02	6.47E+01	2.92E+02	3.91E+02	7.23E+02	1.01E+03	1.95E+03	6.46E-	0.00E+00	0.00E+00	0.00E+00
L-EDEWBODY	05	TOT LIF	1.0000	7.04E+03	3.80E+03	1.80E+04	2.31E+04	3.53E+04	4.18E+04	1.06E+05	1.08E-	0.00E+00	0.00E+00	0.00E+00
POPULATION WEIGHTED RISK														
ERL FAT/TOTAL	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	05	0-80.5 km	1.0000	3.77E-05	2.04E-05	1.01E-04	1.22E-04	1.89E-04	2.22E-04	5.73E-04	1.08E-	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	06	0-16.1 km	1.0000	7.45E-05	3.81E-05	2.02E-04	2.67E-04	4.96E-04	7.05E-04	1.27E-03	6.46E-	0.00E+00	0.00E+00	0.00E+00
PEAK DOSE FOUND ON SPATIAL GRID (Sv)														
L-EDEWBODY	03	0-1.6 km	1.0000	1.71E-01	1.35E-01	2.27E-01	2.53E-01	3.09E-01	3.23E-01	3.34E-01	2.97E-	0.00E+00	0.00E+00	0.00E+00



Calcs. For ENVIRONMENTAL CONSEQUENCE			2009-11222	
ANALYSIS FOR PSEG ESPA			Rev. 2	Date
Safety Related	X	Non-Safety Related	Page 1.1-272 of 1.1-373	
Client PSEG Nuclear Development		Prepared by		
Project PSEG ESPA		Reviewed by		
Proj. No 12380-001		Approved by		
Equip. No.		Date		

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 5 OF 10:
 Case 4

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

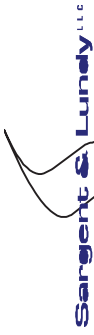
COHORT 1 = 95% EVACUATION

10-JAN-10 17:33:53	PAGE 26	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.37E+01	7.25E+00	3.48E+01	4.54E+01	6.78E+01	7.77E+01	2.27E+02	1.08E-
05 86										
CAN FAT/TOTAL	0-16.1 km	0.6018	4.40E-02	5.97E-04	1.16E-01	2.35E-01	6.09E-01	8.74E-01	4.15E+00	4.09E-
05 338										
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										
EARLY dose L-EDEWBODY > 0.250 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										

POPULATION DOSE (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page 1.1-275 of 1.1-373		

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related								
L-EDEWBODY 04 294	TOT LIF	0-16.1 km	1.0000	1.26E+01	6.18E+00	3.00E+01	4.29E+01	1.04E+02	1.27E+02	3.36E+02	1.36E-
L-EDEWBODY 05 86	TOT LIF	0-80.5 km	1.0000	3.16E+02	1.73E+02	8.06E+02	1.03E+03	1.44E+03	1.66E+03	5.13E+03	1.08E-

POPULATION WEIGHTED RISK

ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00											
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00											
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00											
ERL FAT/TOTAL	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.75E-06	9.51E-06	4.37E-06	4.37E-06	5.64E-06	8.35E-06	9.63E-06	2.80E-05	1.08E-
05 86											
CAN FAT/TOTAL	0-16.1 km	1.0000	9.61E-06	4.74E-06	2.29E-05	3.34E-05	7.94E-05	1.02E-04	2.52E-04	1.36E-	
04 294											

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 04 300	0-1.6 km	1.0000	2.23E-01	2.05E-01	3.62E-01	4.13E-01	5.25E-01	5.53E-01	6.92E-01	2.76E-
----------------------	----------	--------	----------	----------	----------	----------	----------	----------	----------	--------



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.1-276 of 1.1-373		

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

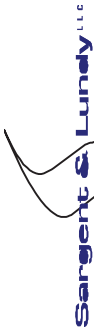
SOURCE TERM 5 OF 10:
Case 4

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:33:53	PAGE 28	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	PEAK	PEAK
QUANTILES											
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	2.98E+02	1.57E+02	7.60E+02	1.47E+03	9.77E+02	1.74E+03	1.74E+03	4.47E+03	1.08E-
05 86											
CAN FAT/TOTAL	0-16.1 km	1.0000	5.00E+00	2.83E+00	1.19E+01	1.70E+01	3.09E+01	4.29E+01	4.29E+01	8.60E+01	6.46E-
06 203											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	1.13E+02	6.35E+01	2.88E+02	7.22E+02	3.88E+02	1.01E+03	1.01E+03	1.95E+03	6.46E-
06 203											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	6.74E+03	3.61E+03	1.69E+04	3.34E+04	2.23E+04	3.92E+04	3.92E+04	1.01E+05	1.08E-
05 86											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	3.60E-05	1.95E-05	9.68E-05	1.18E-04	1.78E-04	2.11E-04	2.11E-04	5.45E-04	1.08E-
05 86											
CAN FAT/TOTAL	0-16.1 km	1.0000	7.33E-05	3.71E-05	1.98E-04	2.65E-04	4.96E-04	7.02E-04	7.02E-04	1.27E-03	6.46E-
06 203											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.1-278 of 1.1-373		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 06 109	1.0000	1.52E-01	1.01E-01	2.94E-01	4.67E-01	1.03E+00	1.16E+00	3.20E+00	5.90E-
INGESTION OF OTHER MEAT CROPS 06 109	1.0000	2.24E-02	1.32E-02	4.47E-02	7.31E-02	1.42E-01	1.75E-01	4.42E-01	5.90E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 86	1.0000	6.74E+03	3.61E+03	1.69E+04	2.23E+04	3.34E+04	3.92E+04	1.01E+05	1.08E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 86	1.0000	6.65E+03	3.52E+03	1.66E+04	2.20E+04	3.31E+04	3.89E+04	1.00E+05	1.08E-
TOTAL INGESTION PATHWAYS DOSE 04 326	1.0000	7.11E+01	5.46E+01	1.22E+02	1.45E+02	2.08E+02	2.28E+02	3.66E+02	1.52E-
LONG-TERM GROUNDSHINE DOSE 05 86	1.0000	6.61E+03	3.51E+03	1.65E+04	2.19E+04	3.29E+04	3.84E+04	9.99E+04	1.08E-
LONG-TERM RESUSPENSION DOSE 05 86	1.0000	3.93E+01	2.12E+01	1.03E+02	1.26E+02	1.98E+02	2.31E+02	5.77E+02	1.08E-
WATER INGESTION DOSE 06 86	1.0000	6.53E+00	4.23E+00	1.39E+01	1.95E+01	2.95E+01	3.36E+01	9.18E+01	7.64E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

MILK DISPOSAL AREA (HECTARES)	0.9987	1.63E+04	1.08E+04	3.58E+04	5.05E+04	7.05E+04	7.12E+04	7.47E+04	1.52E-04
CROP DISPOSAL AREA (HECTARES)	0.9994	2.31E+04	1.89E+04	5.18E+04	6.31E+04	7.57E+04	7.91E+04	1.23E+05	2.47E-05



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-282 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

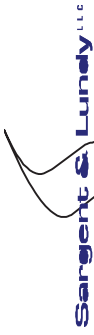
MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 30

SOURCE TERM 5 OF 10:
Case 4

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-07	1.00E-07	1.00E-07	1.00E-08
2.00E-07	2.00E-07	2.00E-07	2.00E-08
3.00E-07	3.00E-07	3.00E-07	3.00E-08
5.00E-07	5.00E-07	5.00E-07	5.00E-08
7.00E-07	7.00E-07	7.00E-07	7.00E-08
1.00E-06	1.00E-06	1.00E-06	1.00E-07
2.00E-06	2.00E-06	2.00E-06	2.00E-07
3.00E-06	3.00E-06	3.00E-06	3.00E-07
5.00E-06	5.00E-06	5.00E-06	5.00E-07
7.00E-06	7.00E-06	7.00E-06	7.00E-07
1.00E-05	1.00E-05	1.00E-05	1.00E-06
2.00E-05	2.00E-05	2.00E-05	2.00E-06
3.00E-05	3.00E-05	3.00E-05	3.00E-06
5.00E-05	5.00E-05	5.00E-05	5.00E-06
7.00E-05	7.00E-05	7.00E-05	7.00E-06
1.00E-04	1.00E-04	1.00E-04	1.00E-05
2.00E-04	2.00E-04	2.00E-04	2.00E-05
3.00E-04	3.00E-04	3.00E-04	3.00E-05
5.00E-04	5.00E-04	5.00E-04	5.00E-05
7.00E-04	7.00E-04	7.00E-04	7.00E-05
1.00E-03	1.00E-03	1.00E-03	1.00E-04
2.00E-03	2.00E-03	2.00E-03	2.00E-04
9.99E-01	9.99E-01	9.99E-01	9.99E-01
9.99E-01	9.99E-01	9.99E-01	9.99E-01

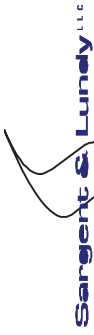


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-291 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 338	0-16.1 km	0.6018	1.34E+00	1.68E-02	3.59E+00	7.18E+00	1.89E+01	2.98E+01	1.27E+02	4.09E-
L-EDEWBODY TOT LIF 05 86	0-80.5 km	1.0000	3.61E+02	1.94E+02	9.51E+02	1.15E+03	1.67E+03	1.96E+03	5.79E+03	1.08E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 05 86	0-80.5 km	1.0000	2.01E-06	1.06E-06	5.29E-06	6.80E-06	1.01E-05	1.13E-05	3.18E-05	1.08E-
CAN FAT/TOTAL 04 338	0-16.1 km	0.6018	1.03E-06	1.32E-08	2.81E-06	5.46E-06	1.43E-05	2.08E-05	9.75E-05	2.36E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 03 251	0-1.6 km	0.9959	1.43E-01	1.22E-01	2.39E-01	2.76E-01	3.21E-01	3.34E-01	3.44E-01	2.97E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.1-293 of 1.1-373

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

L-EDEWBODY 04 294	TOT LIF	0-16.1 km	1.0000	1.64E+01	7.94E+00	3.88E+01	5.67E+01	1.24E+02	1.57E+02	4.35E+02	1.36E-
L-EDEWBODY 05 86	TOT LIF	0-80.5 km	1.0000	3.76E+02	2.08E+02	9.76E+02	1.18E+03	1.76E+03	2.06E+03	5.81E+03	1.08E-

POPULATION WEIGHTED RISK

ERL FAT/TOTAL 0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 05 86	0-80.5 km	1.0000	2.09E-06	1.15E-06	5.39E-06	6.93E-06	1.03E-05	1.14E-05	3.19E-05	1.08E-	
CAN FAT/TOTAL 04 294	0-16.1 km	1.0000	1.26E-05	6.02E-06	3.05E-05	4.37E-05	1.05E-04	1.29E-04	3.29E-04	1.36E-	

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 04 300	0-1.6 km	1.0000	3.12E-01	2.97E-01	5.46E-01	6.20E-01	7.26E-01	7.46E-01	8.35E-01	2.76E-
----------------------	----------	--------	----------	----------	----------	----------	----------	----------	----------	--------



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.1-294 of 1.1-373		

Client	PSEG Nuclear Development	Prepared by	
Project	PSEG ESPA	Reviewed by	
Proj. No	12380-001	Approved by	
	Equip. No.	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 6 OF 10:
Case 5

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:33:53	PAGE 34	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	PEAK	PEAK
QUANTILES											
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	6.47E+02	3.31E+02	1.82E+03	2.51E+03	3.43E+03	3.72E+03	5.42E+03	1.33E-	
04 334											
CAN FAT/TOTAL	0-16.1 km	1.0000	8.18E+00	4.77E+00	1.86E+01	2.56E+01	6.39E+01	7.40E+01	1.46E+02	6.46E-	
06 203											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	1.84E+02	1.05E+02	4.13E+02	5.79E+02	1.19E+03	1.45E+03	3.30E+03	6.46E-	
06 203											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.47E+04	7.71E+03	4.17E+04	5.73E+04	8.21E+04	9.22E+04	1.23E+05	1.33E-	
04 334											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	7.83E-05	3.83E-05	2.20E-04	3.05E-04	4.39E-04	5.05E-04	6.64E-04	1.33E-	
04 334											
CAN FAT/TOTAL	0-16.1 km	1.0000	1.05E-04	5.50E-05	2.49E-04	3.50E-04	8.66E-04	1.03E-03	1.90E-03	6.46E-	
06 203											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.1-295 of 1.1-373	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 343	0-1.6 km	0.5301	3.19E-02	2.54E-02	7.83E-02	8.73E-02	1.04E-01	1.09E-01	1.30E-01	2.47E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 06 203	0-16.1 km	1.0000	1.84E+02	1.05E+02	4.13E+02	5.79E+02	1.19E+03	1.45E+03	3.30E+03	6.46E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 06 203		1.0000	1.44E+02	7.52E+01	3.40E+02	4.62E+02	1.06E+03	1.15E+03	2.62E+03	6.46E-
TOTAL INGESTION PATHWAYS DOSE 05 195		1.0000	1.34E+01	1.05E+01	2.68E+01	3.64E+01	6.47E+01	7.83E+01	2.49E+02	2.06E-
LONG-TERM GROUNDSHINE DOSE 06 203		1.0000	1.44E+02	7.52E+01	3.39E+02	4.61E+02	1.06E+03	1.15E+03	2.62E+03	6.46E-
LONG-TERM RESUSPENSION DOSE 05 292		1.0000	5.66E-01	3.13E-01	1.31E+00	1.84E+00	4.25E+00	5.19E+00	8.45E+00	5.71E-
WATER INGESTION DOSE 05 195		0.8986	9.75E+00	6.25E+00	2.25E+01	3.28E+01	6.14E+01	7.55E+01	2.47E+02	2.06E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 195		0.9691	2.47E+01	1.07E+01	6.04E+01	8.78E+01	2.13E+02	2.59E+02	8.93E+02	2.26E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 195		0.9801	1.50E+00	1.16E+00	3.14E+00	3.71E+00	5.30E+00	5.93E+00	1.09E+01	2.06E-
INGESTION OF GRAINS 05 389		1.0000	1.24E-01	9.37E-02	2.21E-01	3.11E-01	7.34E-01	8.29E-01	1.49E+00	6.66E-
INGESTION OF LEAF VEG 06 204		1.0000	3.41E-01	3.00E-01	6.46E-01	7.71E-01	1.05E+00	1.15E+00	2.08E+00	5.90E-
INGESTION OF ROOT CROPS 04 362		1.0000	2.16E-01	1.63E-01	3.99E-01	5.24E-01	1.02E+00	1.13E+00	1.99E+00	1.05E-
INGESTION OF FRUITS 06 204		1.0000	9.55E-01	8.30E-01	1.74E+00	2.14E+00	2.93E+00	3.14E+00	6.23E+00	5.90E-
INGESTION OF LEGUMES 06 204		1.0000	3.87E-01	3.30E-01	7.23E-01	8.57E-01	1.10E+00	1.17E+00	2.46E+00	5.90E-
INGESTION OF BEEF 05 305		1.0000	7.40E-01	5.45E-01	1.53E+00	2.14E+00	3.17E+00	3.50E+00	6.36E+00	6.66E-
INGESTION OF MILK 04 348		1.0000	6.11E-01	3.76E-01	1.26E+00	1.85E+00	3.84E+00	5.12E+00	7.79E+00	7.52E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

INGESTION OF POULTRY 05 148	1.0000	2.51E-01	1.87E-01	4.87E-01	6.85E-01	1.16E+00	1.33E+00	2.82E+00	6.66E-
INGESTION OF OTHER MEAT CROPS 05 148	1.0000	3.47E-02	2.57E-02	6.74E-02	9.41E-02	1.54E-01	1.88E-01	3.88E-01	6.66E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 334	1.0000	1.47E+04	7.71E+03	4.17E+04	5.73E+04	8.21E+04	9.22E+04	1.23E+05	1.33E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 334	1.0000	1.44E+04	7.55E+03	4.12E+04	5.70E+04	8.17E+04	9.17E+04	1.22E+05	1.33E-
TOTAL INGESTION PATHWAYS DOSE 04 326	1.0000	7.70E+01	6.33E+01	1.33E+02	1.60E+02	2.58E+02	3.13E+02	6.00E+02	1.52E-
LONG-TERM GROUNDSHINE DOSE 04 334	1.0000	1.44E+04	7.48E+03	4.10E+04	5.66E+04	8.12E+04	9.15E+04	1.22E+05	1.33E-
LONG-TERM RESUSPENSION DOSE 04 334	1.0000	8.14E+01	3.87E+01	2.35E+02	3.26E+02	4.96E+02	5.27E+02	7.11E+02	1.33E-
WATER INGESTION DOSE 06 86	1.0000	2.45E+01	1.54E+01	5.46E+01	7.27E+01	1.11E+02	1.26E+02	3.44E+02	7.64E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-300 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

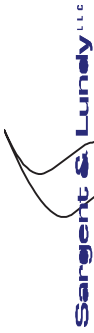
MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 36

SOURCE TERM 6 OF 10:
Case 5

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-07	1.00E-07	1.00E-07	1.00E-08
2.00E-07	2.00E-07	2.00E-07	2.00E-08
3.00E-07	3.00E-07	3.00E-07	3.00E-08
5.00E-07	5.00E-07	5.00E-07	5.00E-08
7.00E-07	7.00E-07	7.00E-07	7.00E-08
1.00E-06	1.00E-06	1.00E-06	1.00E-07
2.00E-06	2.00E-06	2.00E-06	2.00E-07
3.00E-06	3.00E-06	3.00E-06	3.00E-07
5.00E-06	5.00E-06	5.00E-06	5.00E-07
7.00E-06	7.00E-06	7.00E-06	7.00E-07
1.00E-05	1.00E-05	1.00E-05	1.00E-06
2.00E-05	2.00E-05	2.00E-05	2.00E-06
3.00E-05	3.00E-05	3.00E-05	3.00E-06
5.00E-05	5.00E-05	5.00E-05	5.00E-06
7.00E-05	7.00E-05	7.00E-05	7.00E-06
1.00E-04	1.00E-04	1.00E-04	1.00E-05
2.00E-04	2.00E-04	2.00E-04	2.00E-05
3.00E-04	3.00E-04	3.00E-04	3.00E-05
5.00E-04	5.00E-04	5.00E-04	5.00E-05
7.00E-04	7.00E-04	7.00E-04	7.00E-05
1.00E-03	1.00E-03	1.00E-03	1.00E-04
2.00E-03	2.00E-03	2.00E-03	2.00E-04
9.99E-01	9.99E-01	9.95E-01	5.16E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

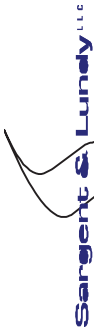
ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page 1.1-309 of 1.1-373

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
Prepared by		Date
Reviewed by		Date
Approved by		Date

L-EDEWBODY 05 224	TOT LIF	0-16.1 km	0.6056	8.45E-01	9.99E-03	2.37E+00	4.82E+00	1.15E+01	1.42E+01	1.03E+02	2.04E-
L-EDEWBODY 03 143	TOT LIF	0-80.5 km	1.0000	2.91E+03	1.56E+03	7.42E+03	8.81E+03	1.21E+04	1.37E+04	1.76E+04	1.17E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL		0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL		0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL		0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL		3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL		0-80.5 km	1.0000	1.77E-05	9.90E-06	4.40E-05	5.43E-05	7.36E-05	8.11E-05	9.97E-05	1.17E-
CAN FAT/TOTAL		0-16.1 km	0.6056	7.57E-07	8.61E-09	2.05E-06	4.27E-06	1.06E-05	1.31E-05	9.19E-05	2.04E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 02 139		0-1.6 km	0.9959	9.43E-02	8.42E-02	1.67E-01	2.06E-01	NOT-FOUND	NOT-FOUND	2.55E-01	1.22E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-311 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 175	TOT LIF 0-16.1 km	1.0000	1.85E+02	9.24E+01	4.49E+02	6.43E+02	1.31E+03	1.74E+03	4.54E+03	4.38E-
L-EDEWBODY 03 143	TOT LIF 0-80.5 km	1.0000	3.09E+03	1.77E+03	7.62E+03	9.13E+03	1.24E+04	1.40E+04	1.79E+04	1.17E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 03 143	0-80.5 km	1.0000	1.90E-05	1.10E-05	4.79E-05	5.63E-05	7.49E-05	8.22E-05	1.01E-04	1.17E-
CAN FAT/TOTAL 04 175	0-16.1 km	1.0000	1.73E-04	8.10E-05	4.14E-04	6.10E-04	1.33E-03	1.79E-03	6.26E-03	4.38E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 373	0-1.6 km	1.0000	2.49E+00	2.25E+00	4.37E+00	5.08E+00	5.62E+00	5.86E+00	7.05E+00	2.85E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.1-312 of 1.1-373		

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

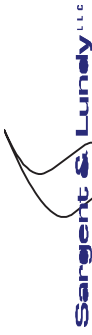
SOURCE TERM 7 OF 10:
Case 6

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:33:53	PAGE 40	PROB	QUANTILES					PEAK	PEAK	
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH		
TRIAL										
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.44E+03	6.90E+02	3.61E+03	4.75E+03	6.66E+03	7.16E+03	1.18E+04	9.51E-
06 155										
CAN FAT/TOTAL	0-16.1 km	1.0000	2.80E+01	2.07E+01	6.30E+01	8.22E+01	1.17E+02	1.29E+02	2.21E+02	1.90E-
05 176										
POPULATION DOSE (Sv)										
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	6.28E+02	4.53E+02	1.36E+03	1.85E+03	3.08E+03	3.24E+03	5.02E+03	1.90E-
05 176										
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	3.26E+04	1.65E+04	8.37E+04	1.04E+05	1.31E+05	1.45E+05	2.68E+05	9.51E-
06 155										
POPULATION WEIGHTED RISK										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.67E-04	7.97E-05	4.34E-04	5.57E-04	7.69E-04	8.44E-04	1.43E-03	9.51E-
06 155										
CAN FAT/TOTAL	0-16.1 km	0.9989	3.22E-04	2.21E-04	7.55E-04	9.89E-04	1.36E-03	1.55E-03	2.22E-03	1.40E-
05 163										

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-313 of 1.1-373

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related		Prepared by		Date	
Project	PSEG ESPA					Reviewed by		Date	
Proj. No	12380-001	Equip. No.				Approved by		Date	

L-EDEWBODY 02 325	0-1.6 km	0.2411	2.12E-02	0.00E+00	1.01E-01	1.10E-01	NOT-FOUND	NOT-FOUND	1.30E-01	1.27E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 176	0-16.1 km	1.0000	6.28E+02	4.53E+02	1.36E+02	1.85E+03	3.08E+03	3.24E+03	5.02E+03	1.90E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 163		0.9989	4.44E+02	3.04E+02	1.05E+03	1.39E+03	2.10E+03	2.21E+03	3.07E+03	1.40E-
TOTAL INGESTION PATHWAYS DOSE 04 175		1.0000	5.48E+01	3.85E+01	1.14E+02	1.61E+02	2.77E+02	3.23E+02	7.50E+02	1.52E-
LONG-TERM GROUNDSHINE DOSE 05 163		0.9989	4.43E+02	3.03E+02	1.05E+03	1.39E+03	2.10E+03	2.21E+03	3.06E+03	1.40E-
LONG-TERM RESUSPENSION DOSE 05 202		0.9989	1.18E+00	7.41E-01	2.92E+00	3.80E+00	6.43E+00	7.16E+00	1.00E+01	1.45E-
WATER INGESTION DOSE 04 175		0.9945	4.74E+01	3.18E+01	1.06E+02	1.51E+02	2.67E+02	3.16E+02	7.50E+02	1.52E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 367		0.9785	1.23E+02	6.05E+01	3.09E+02	4.33E+02	8.97E+02	1.05E+03	1.93E+03	1.24E-
FARM-DEPENDENT DECONTAMINATION DOSE 04 217		0.9796	6.25E+00	5.84E+00	1.11E+01	1.27E+01	1.71E+01	1.95E+01	2.85E+01	1.64E-
INGESTION OF GRAINS 04 93		1.0000	2.23E-01	2.02E-01	3.82E-01	4.63E-01	6.78E-01	7.63E-01	1.14E+00	2.28E-
INGESTION OF LEAF VEG 05 201		1.0000	6.99E-01	6.25E-01	1.20E+00	1.41E+00	2.04E+00	2.22E+00	3.51E+00	1.33E-
INGESTION OF ROOT CROPS 05 201		1.0000	4.11E-01	3.52E-01	7.37E-01	8.59E-01	1.10E+00	1.18E+00	2.06E+00	1.33E-
INGESTION OF FRUITS 05 201		1.0000	2.06E+00	1.83E+00	3.59E+00	4.27E+00	5.80E+00	6.45E+00	1.05E+01	1.33E-
INGESTION OF LEGUMES 05 201		1.0000	8.15E-01	7.31E-01	1.35E+00	1.64E+00	2.31E+00	2.58E+00	4.14E+00	1.33E-
INGESTION OF BEEF 05 237		1.0000	1.56E+00	1.22E+00	3.08E+00	3.77E+00	5.45E+00	5.98E+00	9.91E+00	1.52E-
INGESTION OF MILK 04 285		1.0000	1.09E+00	8.36E-01	2.12E+00	2.72E+00	4.23E+00	5.09E+00	8.85E+00	5.71E-



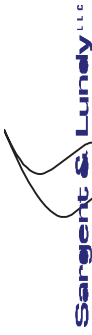
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.1-314 of 1.1-373		

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related							
INGESTION OF POULTRY 06 155	1.0000		4.33E-01	3.69E-01	7.74E-01	9.17E-01	1.24E+00	1.40E+00	3.75E+00	9.51E-
INGESTION OF OTHER MEAT CROPS 06 155	1.0000		6.12E-02	5.32E-02	1.08E-01	1.28E-01	1.90E-01	2.13E-01	5.24E-01	9.51E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 06 155	1.0000		3.26E+04	1.65E+04	8.37E+04	1.04E+05	1.31E+05	1.45E+05	2.68E+05	9.51E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 06 155	1.0000		3.08E+04	1.52E+04	8.10E+04	1.03E+05	1.31E+05	1.45E+05	2.65E+05	9.51E-
TOTAL INGESTION PATHWAYS DOSE 04 175	1.0000		2.77E+02	2.43E+02	4.34E+02	5.14E+02	6.44E+02	7.07E+02	9.96E+02	1.52E-
LONG-TERM GROUNDSHINE DOSE 06 155	1.0000		3.07E+04	1.51E+04	8.05E+04	1.03E+05	1.31E+05	1.45E+05	2.63E+05	9.51E-
LONG-TERM RESUSPENSION DOSE 06 155	1.0000		1.68E+02	7.59E+01	4.49E+02	5.75E+02	8.22E+02	9.32E+02	1.53E+03	9.51E-
WATER INGESTION DOSE 04 175	1.0000		1.28E+02	8.79E+01	2.74E+02	3.53E+02	5.36E+02	5.90E+02	8.90E+02	1.52E-



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			Rev. 2	Date
Safety Related	X	Non-Safety Related	Page 1.1-316 of 1.1-373	
Client	PSEG Nuclear Development			
Project	PSEG ESPA			
Proj. No	12380-001	Equip. No.		

POP.-DEPENDENT DECONTAMINATION COST 04 85	1.0000	4.70E+09	2.44E+09	1.19E+10	1.57E+10	2.59E+10	3.06E+10	4.53E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 30	1.0000	6.51E+07	5.41E+07	1.12E+08	1.29E+08	1.80E+08	2.06E+08	2.81E+08	6.08E-
POP.-DEPENDENT INTERDICTION COST 04 30	1.0000	1.29E+10	7.25E+09	3.61E+10	5.05E+10	6.75E+10	7.65E+10	1.07E+11	1.57E-
FARM-DEPENDENT INTERDICTION COST 04 59	1.0000	1.99E+08	1.48E+08	3.73E+08	4.68E+08	5.69E+08	6.06E+08	7.96E+08	3.42E-
POP.-DEPENDENT CONDEMNATION COST 04 168	0.4925	2.81E+07	0.00E+00	6.11E+07	9.95E+07	2.61E+08	8.58E+08	6.22E+09	7.19E-
FARM-DEPENDENT CONDEMNATION COST 04 175	0.9396	1.81E+06	8.56E+05	4.72E+06	6.33E+06	8.86E+06	9.99E+06	3.08E+07	2.28E-
EMERGENCY PHASE COST 04 30	1.0000	1.67E+08	7.90E+07	4.42E+08	6.14E+08	8.50E+08	9.41E+08	1.36E+09	8.13E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 04 59	1.0000	4.22E+06	1.77E+06	1.17E+07	1.61E+07	2.19E+07	2.31E+07	2.93E+07	2.57E-
CROP DISPOSAL COST 04 59	1.0000	1.87E+08	1.56E+08	3.01E+08	3.29E+08	4.07E+08	4.46E+08	5.32E+08	7.80E-
AFFECTED AREA/POPULATION FARM DECONTAMINATION (HECTARES) 04 59	1.0000	3.90E+04	3.16E+04	7.26E+04	7.98E+04	9.95E+04	1.11E+05	1.70E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	1.0000	4.95E+05	2.47E+05	1.38E+06	2.01E+06	2.55E+06	2.83E+06	4.14E+06	4.85E-
FARM INTERDICTION (HECTARES) 04 329	1.0000	7.96E+04	7.00E+04	1.42E+05	1.78E+05	2.10E+05	2.16E+05	2.43E+05	2.19E-
POP. INTERDICTION (INDIVIDUALS) 04 59	1.0000	4.95E+05	2.47E+05	1.38E+06	2.01E+06	2.55E+06	2.83E+06	4.14E+06	4.85E-
FARM CONDEMNATION (HECTARES) 04 175	0.9396	1.21E+02	5.31E+01	3.02E+02	4.39E+02	6.25E+02	7.00E+02	2.26E+03	2.28E-
POP. CONDEMNATION (INDIVIDUALS) 04 168	0.4925	9.61E+01	0.00E+00	1.75E+02	3.44E+02	6.68E+02	2.73E+03	1.98E+04	7.19E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-318 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

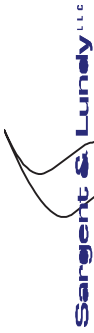
MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 42

SOURCE TERM 7 OF 10:
Case 6

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-07	1.00E-08	1.00E-06	1.00E-09
2.00E-07	1.00E-08	2.00E-06	2.00E-09
3.00E-07	1.00E-08	3.00E-06	3.00E-09
5.00E-07	1.00E-08	5.00E-06	5.00E-09
7.00E-07	1.00E-08	7.00E-06	7.00E-09
1.00E-06	1.00E-07	1.00E-05	1.00E-08
2.00E-06	1.00E-07	2.00E-05	2.00E-08
3.00E-06	1.00E-07	3.00E-05	3.00E-08
5.00E-06	1.00E-07	5.00E-05	5.00E-08
7.00E-06	1.00E-07	7.00E-05	7.00E-08
1.00E-05	1.00E-06	1.00E-04	1.00E-07
2.00E-05	1.00E-06	2.00E-04	2.00E-07
3.00E-05	1.00E-06	3.00E-04	3.00E-07
5.00E-05	1.00E-06	5.00E-04	5.00E-07
7.00E-05	1.00E-06	7.00E-04	7.00E-07
1.00E-04	1.00E-05	1.00E-03	1.00E-06
2.00E-04	1.00E-05	2.00E-03	2.00E-06
3.00E-04	1.00E-05	3.00E-03	3.00E-06
5.00E-04	1.00E-05	5.00E-03	5.00E-06
7.00E-04	1.00E-05	7.00E-03	7.00E-06
1.00E-03	1.00E-04	1.00E-02	1.00E-05
2.00E-03	1.00E-04	2.00E-02	2.00E-05



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			Rev. 2	Date
Safety Related	X	Non-Safety Related	Page 1.1-325 of 1.1-373	
Client	PSEG Nuclear Development			
Project	PSEG ESPA			
Proj. No	12380-001	Equip. No.		

ERL FAT/TOTAL 0.00E+00 0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00 0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
POPULATION EXCEEDING DOSE														
EARLY dose	L-EDEWBODY > 2.00 Sv	0.0050	6.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
04	176													
EARLY dose	L-EDEWBODY > 0.250 Sv	0.6080	8.07E+00	1.91E-01	1.29E+01	1.34E+02	1.87E+02	7.11E+02	6.17E-					
04	217													
POPULATION DOSE (Sv)														
L-EDEWBODY	TOT LIF	1.0000	7.30E+02	5.12E+02	1.64E+03	3.43E+03	4.03E+03	5.75E+03	2.95E-					
04	59													
L-EDEWBODY	TOT LIF	1.0000	5.16E+04	2.59E+04	1.21E+05	2.21E+05	2.40E+05	3.47E+05	9.51E-					
06	4													
POPULATION WEIGHTED RISK														
ERL FAT/TOTAL 0.00E+00 0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00 0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00 0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00 0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00 0	0-80.5 km	1.0000	2.57E-04	1.34E-04	6.55E-04	8.20E-04	1.11E-03	1.67E-03	9.51E-					
CAN FAT/TOTAL 06	4													
CAN FAT/TOTAL 04	59													
PEAK DOSE FOUND ON SPATIAL GRID (Sv)														
L-EDEWBODY	0-1.6 km	1.0000	3.67E-01	3.32E-01	6.29E-01	7.84E-01	8.17E-01	9.02E-01	9.51E-					
04	257													



Calcs. For ENVIRONMENTAL CONSEQUENCE		2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 8 OF 10:
 Case 7

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION

10-JAN-10 17:33:53	PAGE 44	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	2.01E+02	1.10E+02	5.18E+02	6.05E+02	7.78E+02	8.40E+02	1.18E+03	9.51E-
06 172	0-16.1 km	0.6056	7.62E-02	8.63E-04	2.05E-01	4.28E-01	1.07E+00	1.32E+00	9.21E+00	2.04E-
05 224	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00	0									
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00	0									

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0									
EARLY dose L-EDEWBODY > 0.250 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0									

POPULATION DOSE (Sv)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-327 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 224	0-16.1 km	0.6056	1.43E+00	1.54E-02	3.97E+00	8.12E+00	1.86E+01	2.62E+01	1.73E+02	2.04E-
L-EDEWBODY TOT LIF 06 172	0-80.5 km	1.0000	4.03E+03	2.20E+03	1.02E+04	1.14E+04	1.46E+04	1.63E+04	2.29E+04	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 06 172	0-80.5 km	1.0000	2.47E-05	1.36E-05	6.24E-05	7.36E-05	9.26E-05	1.01E-04	1.45E-04	9.51E-
CAN FAT/TOTAL 05 224	0-16.1 km	0.6056	1.25E-06	1.39E-08	3.51E-06	7.06E-06	1.62E-05	2.11E-05	1.51E-04	2.04E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 02 139	0-1.6 km	0.9959	1.61E-01	1.36E-01	2.94E-01	3.37E-01	NOT-FOUND	NOT-FOUND	4.37E-01	1.22E-



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			Rev. 2	Date
Safety Related	X	Non-Safety Related	Page 1.1-328 of 1.1-373	
Client PSEG Nuclear Development		Prepared by	Date	
Project PSEG ESPA		Reviewed by	Date	
Proj. No 12380-001		Approved by	Date	
Equip. No.				

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 8 OF 10:
 Case 7

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

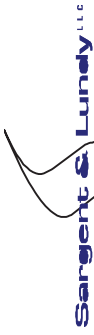
COHORT 2 = NO EVACUATION

10-JAN-10 17:33:53	PAGE 45	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	2.19E+02	1.24E+02	5.47E+02	6.49E+02	8.04E+02	8.66E+02	1.22E+03	9.51E-
06 172										
CAN FAT/TOTAL	0-16.1 km	1.0000	1.84E+01	8.17E+00	4.31E+01	6.88E+01	1.47E+02	2.00E+02	6.72E+02	4.38E-
04 175										
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0050	1.38E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E+01	1.19E-
04 176										
EARLY dose L-EDEWBODY > 0.250 Sv	0.6080	1.61E+02	3.98E+00	2.65E+02	7.85E+02	2.81E+03	3.98E+03	1.42E+04	1.79E-	
04 217										

POPULATION DOSE (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.1-329 of 1.1-373	
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

L-EDEWBODY 04 175	TOT LIF	0-16.1 km	1.0000	2.97E+02	1.42E+02	7.22E+02	1.04E+03	2.13E+03	2.80E+03	7.43E+03	4.38E-
L-EDEWBODY 06 172	TOT LIF	0-80.5 km	1.0000	4.33E+03	2.51E+03	1.05E+04	1.16E+04	1.48E+04	1.64E+04	2.36E+04	9.51E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0	0-80.5 km	1.0000	2.69E-05	1.58E-05	6.64E-05	7.73E-05	1.01E-04	1.05E-04	1.50E-04	9.51E-
CAN FAT/TOTAL	0	0-16.1 km	1.0000	3.02E-04	1.27E-04	7.10E-04	1.09E-03	2.34E-03	3.24E-03	1.10E-02	4.38E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 04 373		0-1.6 km	1.0000	4.00E+00	3.60E+00	7.11E+00	7.57E+00	8.76E+00	9.32E+00	1.14E+01	2.85E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.1-330 of 1.1-373		

Client	PSEG Nuclear Development	Prepared by	
Project	PSEG ESPA	Reviewed by	
Proj. No	12380-001	Approved by	
	Equip. No.	Date	
		Date	
		Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

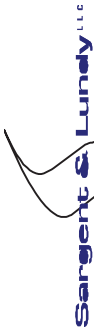
SOURCE TERM 8 OF 10:
Case 7

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:33:53	PAGE 46	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	PEAK	PEAK
QUANTILES											
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	2.10E+03	1.08E+03	5.30E+03	6.69E+03	9.34E+03	1.02E+04	1.46E+04	1.46E+04	9.51E-
06											
CAN FAT/TOTAL	0-16.1 km	1.0000	3.22E+01	2.24E+01	7.34E+01	9.69E+01	1.68E+02	2.03E+02	2.53E+02	2.53E+02	2.95E-
04											
59											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	7.13E+02	4.96E+02	1.61E+03	2.18E+03	3.41E+03	4.02E+03	5.73E+03	5.73E+03	2.95E-
04											
59											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	4.76E+04	2.41E+04	1.14E+04	1.40E+05	2.08E+05	2.21E+05	3.31E+05	3.31E+05	9.51E-
06											
4											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	2.32E-04	1.13E-04	5.81E-04	7.39E-04	1.03E-03	1.07E-03	1.58E-03	1.58E-03	9.51E-
06											
4											
CAN FAT/TOTAL	0-16.1 km	0.9775	3.01E-04	1.60E-04	7.60E-04	1.04E-03	1.84E-03	2.09E-03	2.76E-03	2.76E-03	2.95E-
04											
59											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



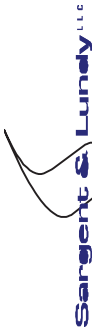
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.1-332 of 1.1-373		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 04 186	1.0000	6.43E-01	5.70E-01	1.17E+00	1.38E+00	2.01E+00	2.21E+00	3.26E+00	1.78E-
INGESTION OF OTHER MEAT CROPS 04 186	1.0000	8.97E-02	7.86E-02	1.63E-01	2.07E-01	2.95E-01	3.19E-01	4.48E-01	1.78E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 06 4	1.0000	4.76E+04	2.41E+04	1.14E+04	1.40E+05	2.08E+05	2.21E+05	3.31E+05	9.51E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 06 4	1.0000	4.29E+04	2.08E+04	1.07E+04	1.31E+05	2.01E+05	2.09E+05	2.92E+05	9.51E-
TOTAL INGESTION PATHWAYS DOSE 04 175	1.0000	5.31E+02	4.39E+02	9.48E+02	1.12E+03	1.52E+03	1.73E+03	2.64E+03	1.52E-
LONG-TERM GROUNDSHINE DOSE 06 4	1.0000	4.27E+04	2.07E+04	1.07E+04	1.30E+05	2.01E+05	2.08E+05	2.90E+05	9.51E-
LONG-TERM RESUSPENSION DOSE 03 282	1.0000	2.05E+02	9.16E+01	5.48E+02	7.21E+02	1.01E+03	1.11E+03	1.35E+03	1.17E-
WATER INGESTION DOSE 04 175	1.0000	3.69E+02	2.52E+02	7.82E+02	1.03E+03	1.39E+03	1.59E+03	2.56E+03	1.52E-



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related	Rev. 2	Date
			Page 1.1-334 of 1.1-373	
Client PSEG Nuclear Development				
Project PSEG ESPA				
Proj. No 12380-001 Equip. No.				
Prepared by		Date		
Reviewed by		Date		
Approved by		Date		

POP. -DEPENDENT DECONTAMINATION COST 04 59	1.0000	8.42E+09	4.23E+09	2.30E+10	3.02E+10	4.00E+10	4.52E+10	7.30E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	1.0000	1.07E+08	8.89E+07	1.85E+08	2.14E+08	2.66E+08	2.92E+08	4.83E+08	3.42E-
POP. -DEPENDENT INTERDICTION COST 04 85	1.0000	2.43E+10	1.26E+10	6.26E+10	7.47E+10	9.90E+10	1.16E+11	2.01E+11	4.85E-
FARM-DEPENDENT INTERDICTION COST 04 59	1.0000	2.46E+08	2.04E+08	4.47E+08	5.34E+08	6.88E+08	7.23E+08	8.41E+08	3.42E-
POP. -DEPENDENT CONDEMNATION COST 05 86	0.7844	3.71E+08	3.13E+07	1.17E+09	1.67E+09	5.05E+09	5.18E+09	6.50E+09	1.24E-
FARM-DEPENDENT CONDEMNATION COST 05 75	0.9634	8.22E+06	3.90E+06	2.41E+07	2.90E+07	3.20E+07	3.30E+07	4.06E+07	4.42E-
EMERGENCY PHASE COST 04 85	1.0000	2.06E+08	1.10E+08	5.42E+08	7.16E+08	9.96E+08	1.13E+09	1.74E+09	4.85E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 04 59	1.0000	5.50E+06	2.37E+06	1.45E+07	2.04E+07	2.34E+07	2.49E+07	2.93E+07	7.80E-
CROP DISPOSAL COST 04 329	1.0000	2.09E+08	1.92E+08	3.12E+08	3.41E+08	4.21E+08	4.61E+08	5.71E+08	1.43E-
AFFECTED AREA/POPULATION 0-80.5 km									
FARM DECONTAMINATION (HECTARES) 04 59	1.0000	5.39E+04	4.53E+04	8.90E+04	1.04E+05	1.35E+05	1.51E+05	2.28E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	1.0000	6.79E+05	3.69E+05	1.64E+06	2.14E+06	2.97E+06	3.47E+06	5.45E+06	4.85E-
FARM INTERDICTION (HECTARES) 04 329	1.0000	8.79E+04	7.63E+04	1.50E+05	1.88E+05	2.17E+05	2.26E+05	2.64E+05	3.52E-
POP. INTERDICTION (INDIVIDUALS) 04 59	1.0000	6.79E+05	3.69E+05	1.64E+06	2.14E+06	2.97E+06	3.47E+06	5.45E+06	4.85E-
FARM CONDEMNATION (HECTARES) 05 75	0.9634	5.19E+02	2.49E+02	1.42E+03	1.93E+03	2.18E+03	2.27E+03	2.97E+03	4.42E-
POP. CONDEMNATION (INDIVIDUALS) 05 86	0.7844	1.30E+03	1.22E+02	4.73E+03	6.23E+03	1.04E+04	1.17E+04	2.07E+04	1.24E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-336 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

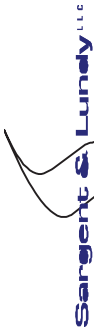
MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 48

SOURCE TERM 8 OF 10:
Case 7

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-07	1.00E-07	1.00E-06	1.00E-09
2.00E-07	2.00E-07	2.00E-06	2.00E-09
3.00E-07	3.00E-07	3.00E-06	3.00E-09
5.00E-07	5.00E-07	5.00E-06	5.00E-09
7.00E-07	7.00E-07	7.00E-06	7.00E-09
1.00E-06	1.00E-06	1.00E-05	1.00E-08
2.00E-06	2.00E-06	2.00E-05	2.00E-08
3.00E-06	3.00E-06	3.00E-05	3.00E-08
5.00E-06	5.00E-06	5.00E-05	5.00E-08
7.00E-06	7.00E-06	7.00E-05	7.00E-08
1.00E-05	1.00E-05	1.00E-04	1.00E-07
2.00E-05	2.00E-05	2.00E-04	2.00E-07
3.00E-05	3.00E-05	3.00E-04	3.00E-07
5.00E-05	5.00E-05	5.00E-04	5.00E-07
7.00E-05	7.00E-05	7.00E-04	7.00E-07
1.00E-04	1.00E-04	1.00E-03	1.00E-06
2.00E-04	2.00E-04	2.00E-03	2.00E-06
3.00E-04	3.00E-04	3.00E-03	3.00E-06
5.00E-04	5.00E-04	5.00E-03	5.00E-06
7.00E-04	7.00E-04	7.00E-03	7.00E-06
1.00E-03	1.00E-03	1.00E-02	1.00E-05
2.00E-03	2.00E-03	2.00E-02	2.00E-05
3.00E-03	3.00E-03	3.00E-02	3.00E-05
5.00E-03	5.00E-03	5.00E-02	5.00E-05
7.00E-03	7.00E-03	7.00E-02	7.00E-05
1.00E-02	1.00E-02	1.00E-01	1.00E-04
2.00E-02	2.00E-02	2.00E-01	2.00E-04
3.00E-02	3.00E-02	3.00E-01	3.00E-04
5.00E-02	5.00E-02	5.00E-01	5.00E-04
7.00E-02	7.00E-02	7.00E-01	7.00E-04
1.00E-01	1.00E-01	1.00E-00	1.00E-03
2.00E-01	2.00E-01	2.00E-00	2.00E-03
3.00E-01	3.00E-01	3.00E-00	3.00E-03
5.00E-01	5.00E-01	5.00E-00	5.00E-03
7.00E-01	7.00E-01	7.00E-00	7.00E-03
1.00E-00	1.00E-00	1.00E+00	1.00E-02
2.00E-00	2.00E-00	2.00E+00	2.00E-02
3.00E-00	3.00E-00	3.00E+00	3.00E-02
5.00E-00	5.00E-00	5.00E+00	5.00E-02
7.00E-00	7.00E-00	7.00E+00	7.00E-02
1.00E+00	1.00E+00	1.00E+00	1.00E-01
2.00E+00	2.00E+00	2.00E+00	2.00E-01
3.00E+00	3.00E+00	3.00E+00	3.00E-01
5.00E+00	5.00E+00	5.00E+00	5.00E-01
7.00E+00	7.00E+00	7.00E+00	7.00E-01
1.00E+01	1.00E+01	1.00E+00	1.00E-01
2.00E+01	2.00E+01	2.00E+00	2.00E-01
3.00E+01	3.00E+01	3.00E+00	3.00E-01
5.00E+01	5.00E+01	5.00E+00	5.00E-01
7.00E+01	7.00E+01	7.00E+00	7.00E-01
1.00E+02	1.00E+02	1.00E+00	1.00E-01
2.00E+02	2.00E+02	2.00E+00	2.00E-01
3.00E+02	3.00E+02	3.00E+00	3.00E-01
5.00E+02	5.00E+02	5.00E+00	5.00E-01
7.00E+02	7.00E+02	7.00E+00	7.00E-01
1.00E+03	1.00E+03	1.00E+00	1.00E-01
2.00E+03	2.00E+03	2.00E+00	2.00E-01
3.00E+03	3.00E+03	3.00E+00	3.00E-01
5.00E+03	5.00E+03	5.00E+00	5.00E-01
7.00E+03	7.00E+03	7.00E+00	7.00E-01
1.00E+04	1.00E+04	1.00E+00	1.00E-01
2.00E+04	2.00E+04	2.00E+00	2.00E-01
3.00E+04	3.00E+04	3.00E+00	3.00E-01
5.00E+04	5.00E+04	5.00E+00	5.00E-01
7.00E+04	7.00E+04	7.00E+00	7.00E-01
1.00E+05	1.00E+05	1.00E+00	1.00E-01
2.00E+05	2.00E+05	2.00E+00	2.00E-01
3.00E+05	3.00E+05	3.00E+00	3.00E-01
5.00E+05	5.00E+05	5.00E+00	5.00E-01
7.00E+05	7.00E+05	7.00E+00	7.00E-01
1.00E+06	1.00E+06	1.00E+00	1.00E-01
2.00E+06	2.00E+06	2.00E+00	2.00E-01
3.00E+06	3.00E+06	3.00E+00	3.00E-01
5.00E+06	5.00E+06	5.00E+00	5.00E-01
7.00E+06	7.00E+06	7.00E+00	7.00E-01
1.00E+07	1.00E+07	1.00E+00	1.00E-01
2.00E+07	2.00E+07	2.00E+00	2.00E-01
3.00E+07	3.00E+07	3.00E+00	3.00E-01
5.00E+07	5.00E+07	5.00E+00	5.00E-01
7.00E+07	7.00E+07	7.00E+00	7.00E-01
1.00E+08	1.00E+08	1.00E+00	1.00E-01
2.00E+08	2.00E+08	2.00E+00	2.00E-01
3.00E+08	3.00E+08	3.00E+00	3.00E-01
5.00E+08	5.00E+08	5.00E+00	5.00E-01
7.00E+08	7.00E+08	7.00E+00	7.00E-01
1.00E+09	1.00E+09	1.00E+00	1.00E-01
2.00E+09	2.00E+09	2.00E+00	2.00E-01
3.00E+09	3.00E+09	3.00E+00	3.00E-01
5.00E+09	5.00E+09	5.00E+00	5.00E-01
7.00E+09	7.00E+09	7.00E+00	7.00E-01
1.00E+10	1.00E+10	1.00E+00	1.00E-01
2.00E+10	2.00E+10	2.00E+00	2.00E-01
3.00E+10	3.00E+10	3.00E+00	3.00E-01
5.00E+10	5.00E+10	5.00E+00	5.00E-01
7.00E+10	7.00E+10	7.00E+00	7.00E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.1-345 of 1.1-373

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

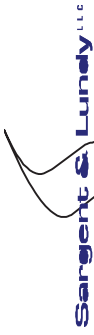
L-EDEWBODY 05 224	TOT LIF	0-16.1 km	0.6059	3.73E+00	3.99E-02	1.01E+01	2.14E+01	4.84E+01	6.47E+01	4.47E+02	2.04E-
L-EDEWBODY 04 258	TOT LIF	0-80.5 km	1.0000	9.04E+03	4.98E+03	2.38E+04	3.03E+04	3.62E+04	3.91E+04	6.23E+04	1.14E-

POPULATION WEIGHTED RISK

ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 05 283	0-80.5 km	1.0000	5.84E-05	3.11E-05	1.43E-04	1.98E-04	2.76E-04	3.09E-04	5.11E-04	3.81E-	
CAN FAT/TOTAL 05 224	0-16.1 km	0.6059	3.32E-06	3.70E-08	9.29E-06	1.87E-05	4.22E-05	3.95E-04	2.04E-		

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 04 43	0-1.6 km	0.9959	3.46E-01	3.19E-01	5.96E-01	6.90E-01	9.50E-01	1.05E+00	2.57E-	
---------------------	----------	--------	----------	----------	----------	----------	----------	----------	--------	--



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page		1.1-347 of 1.1-373	

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	<input type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> Non-Safety Related	
		Prepared by	Date
		Reviewed by	Date
		Approved by	Date

L-EDEWBODY 04 175	TOT LIF	0-16.1 km	1.0000	7.39E+02	3.41E+02	1.79E+02	2.59E+03	5.46E+03	7.16E+03	1.79E+04	4.38E-
L-EDEWBODY 04 258	TOT LIF	0-80.5 km	1.0000	9.78E+03	5.55E+03	2.50E+04	3.07E+04	3.65E+04	3.93E+04	6.46E+04	1.14E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL 05 43		0-80.5 km	0.0108	4.82E-11	0.00E+00	0.00E+00	0.00E+00	3.98E-10	1.19E-09	1.01E-07	1.29E-
ERL FAT/TOTAL 0.00E+00		0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00		0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 05 43		3.2-4.8 km	0.0108	3.36E-06	0.00E+00	0.00E+00	0.00E+00	3.19E-05	8.09E-05	7.01E-03	1.29E-
CAN FAT/TOTAL 05 283		0-80.5 km	1.0000	6.55E-05	3.66E-05	1.62E-04	2.14E-04	3.04E-04	3.24E-04	5.15E-04	3.81E-
CAN FAT/TOTAL 04 175		0-16.1 km	1.0000	9.53E-04	3.69E-04	2.43E-03	3.60E-03	7.78E-03	1.04E-02	2.77E-02	4.38E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 04 43		0-1.6 km	1.0000	8.36E+00	7.58E+00	1.26E+01	1.43E+01	1.91E+01	2.05E+01	2.44E+01	2.57E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.1-348 of 1.1-373		

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

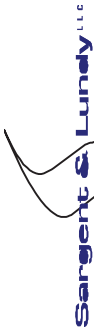
SOURCE TERM 9 OF 10:
Case 8

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:33:53	PAGE 52	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	2.92E+03	1.46E+03	7.68E+03	1.19E+04	1.30E+04	1.75E+04	4.85E-		
04 85											
CAN FAT/TOTAL	0-16.1 km	1.0000	3.70E+01	2.98E+01	8.25E+01	1.07E+02	1.74E+02	3.05E+02	1.45E-		
05 201											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	8.08E+02	6.32E+02	1.80E+03	3.43E+03	3.90E+03	6.91E+03	1.45E-		
05 201											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	6.60E+04	3.23E+04	1.63E+05	2.70E+05	3.00E+05	3.97E+05	4.85E-		
04 85											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	3.06E-04	1.48E-04	8.19E-04	1.02E-03	1.21E-03	1.30E-03	1.66E-03	4.85E-	
04 85											
CAN FAT/TOTAL	0-16.1 km	0.9766	2.95E-04	1.72E-04	7.04E-04	1.04E-03	1.44E-03	2.94E-03	1.45E-		
05 201											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



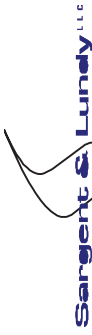
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page		1.1-350 of 1.1-373	

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
		Approved by		Date	

INGESTION OF POULTRY 04 182	1.0000	5.47E-01	4.51E-01	1.07E+00	1.30E+00	2.01E+00	2.22E+00	2.90E+00	7.61E-
INGESTION OF OTHER MEAT CROPS 04 182	1.0000	7.53E-02	6.22E-02	1.44E-01	1.89E-01	2.78E-01	3.14E-01	3.99E-01	7.61E-
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km									
TOTAL LONG-TERM PATHWAYS DOSE 04 85	1.0000	6.60E+04	3.23E+04	1.63E+05	2.11E+05	2.70E+05	3.00E+05	3.97E+05	4.85E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 85	1.0000	5.65E+04	2.65E+04	1.32E+05	1.75E+05	2.30E+05	2.48E+05	3.06E+05	4.85E-
TOTAL INGESTION PATHWAYS DOSE 04 175	1.0000	9.47E+02	7.18E+02	1.84E+03	2.39E+03	3.35E+03	3.64E+03	5.63E+03	1.52E-
LONG-TERM GROUNDSHINE DOSE 04 85	1.0000	5.63E+04	2.64E+04	1.32E+05	1.73E+05	2.29E+05	2.47E+05	3.06E+05	4.85E-
LONG-TERM RESUSPENSION DOSE 04 307	1.0000	2.36E+02	9.76E+01	7.10E+02	8.16E+02	1.05E+03	1.10E+03	1.41E+03	2.00E-
WATER INGESTION DOSE 04 175	1.0000	7.76E+02	5.34E+02	1.69E+03	2.28E+03	3.30E+03	3.59E+03	5.46E+03	1.52E-



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.1-352 of 1.1-373

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

POP. -DEPENDENT DECONTAMINATION COST	1.0000	1.08E+10	5.35E+09	3.01E+10	3.66E+10	5.84E+10	8.34E+10	4.85E-
04 59								
FARM-DEPENDENT DECONTAMINATION COST	1.0000	1.35E+08	1.12E+08	2.26E+08	2.63E+08	3.68E+08	5.42E+08	3.42E-
04 59								
POP. -DEPENDENT INTERDICTION COST	1.0000	3.95E+10	2.02E+10	1.01E+11	1.24E+11	2.30E+11	4.15E+11	9.51E-
06 4								
FARM-DEPENDENT INTERDICTION COST	1.0000	2.95E+08	2.47E+08	5.23E+08	6.10E+08	7.80E+08	9.25E+08	3.42E-
04 85								
POP. -DEPENDENT CONDEMNATION COST	0.8654	2.53E+09	2.82E+08	3.56E+09	7.81E+09	5.14E+10	5.39E+10	4.29E-
04 11								
FARM-DEPENDENT CONDEMNATION COST	0.9440	2.10E+07	2.10E+07	3.85E+07	7.29E+07	1.05E+08	1.08E+08	1.13E-
05 162								
EMERGENCY PHASE COST	1.0000	3.44E+08	1.64E+08	1.00E+09	1.09E+09	1.48E+09	2.02E+09	4.85E-
04 59								
INTERMEDIATE PHASE COST	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00								
MILK DISPOSAL COST	1.0000	6.07E+06	2.62E+06	1.61E+07	2.07E+07	2.53E+07	3.15E+07	1.81E-
04 329								
CROP DISPOSAL COST	1.0000	2.29E+08	2.10E+08	3.20E+08	3.49E+08	4.66E+08	5.71E+08	1.43E-
04 329								
AFFECTED AREA/POPULATION				0-80.5 km				
FARM DECONTAMINATION (HECTARES)	1.0000	6.79E+04	5.67E+04	1.16E+05	1.38E+05	2.04E+05	2.28E+05	2.15E-
05 201								
POP. DECONTAMINATION (INDIVIDUALS)	1.0000	8.91E+05	4.12E+05	2.23E+06	3.09E+06	5.05E+06	5.45E+06	1.27E-
05 201								
FARM INTERDICTION (HECTARES)	1.0000	9.46E+04	8.10E+04	1.58E+05	2.00E+05	2.28E+05	2.64E+05	3.52E-
04 329								
POP. INTERDICTION (INDIVIDUALS)	1.0000	8.91E+05	4.12E+05	2.23E+06	3.09E+06	5.05E+06	5.45E+06	1.27E-
05 201								
FARM CONDEMNATION (HECTARES)	0.9440	1.33E+03	1.12E+03	2.51E+03	5.08E+03	7.26E+03	1.00E+04	1.13E-
05 162								
POP. CONDEMNATION (INDIVIDUALS)	0.8654	8.99E+03	9.46E+02	1.19E+04	3.39E+04	1.59E+05	2.02E+05	2.67E-
04 11								



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-354 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

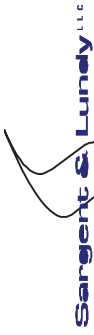
MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 54

SOURCE TERM 9 OF 10:
Case 8

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-07	1.00E-07	1.00E-05	1.00E-09
2.00E-07	2.00E-07	2.00E-05	2.00E-09
3.00E-07	3.00E-07	3.00E-05	3.00E-09
5.00E-07	5.00E-07	5.00E-05	5.00E-09
7.00E-07	7.00E-07	7.00E-05	7.00E-09
1.00E-06	1.00E-06	1.00E-04	1.00E-08
2.00E-06	2.00E-06	2.00E-04	2.00E-08
3.00E-06	3.00E-06	3.00E-04	3.00E-08
5.00E-06	5.00E-06	5.00E-04	5.00E-08
7.00E-06	7.00E-06	7.00E-04	7.00E-08
1.00E-05	1.00E-05	1.00E-03	1.00E-07
2.00E-05	2.00E-05	2.00E-03	2.00E-07
3.00E-05	3.00E-05	3.00E-03	3.00E-07
5.00E-05	5.00E-05	5.00E-03	5.00E-07
7.00E-05	7.00E-05	7.00E-03	7.00E-07
1.00E-04	1.00E-04	1.00E-02	1.00E-06
2.00E-04	2.00E-04	2.00E-02	2.00E-06
3.00E-04	3.00E-04	3.00E-02	3.00E-06
5.00E-04	5.00E-04	5.00E-02	5.00E-06
7.00E-04	7.00E-04	7.00E-02	7.00E-06
1.00E-03	1.00E-03	1.00E-01	1.00E-05
2.00E-03	2.00E-03	2.00E-01	2.00E-05
3.00E-03	3.00E-03	3.00E-01	3.00E-05
5.00E-03	5.00E-03	5.00E-01	5.00E-05
7.00E-03	7.00E-03	7.00E-01	7.00E-05



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.1-365 of 1.1-373

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related								
L-EDEWBODY 04 175	TOT LIF	0-16.1 km	1.0000	1.11E+03	5.51E+02	2.72E+03	3.82E+03	7.98E+03	1.03E+04	2.79E+04	4.38E-
L-EDEWBODY 06 172	TOT LIF	0-80.5 km	1.0000	1.36E+04	7.88E+03	3.37E+04	4.11E+04	5.66E+04	6.21E+04	8.73E+04	9.51E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL 05 176		0-80.5 km	0.0606	8.83E-10	0.00E+00	0.00E+00	4.05E-10	2.02E-08	3.53E-08	1.22E-06	5.71E-
ERL FAT/TOTAL 0.00E+00		0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00		0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 05 176		3.2-4.8 km	0.0531	3.67E-05	0.00E+00	0.00E+00	1.33E-05	5.03E-04	1.23E-03	5.84E-02	5.71E-
CAN FAT/TOTAL 04 258		0-80.5 km	1.0000	9.46E-05	5.42E-05	2.34E-04	3.04E-04	4.13E-04	4.71E-04	6.69E-04	1.24E-
CAN FAT/TOTAL 04 175		0-16.1 km	1.0000	1.54E-03	6.70E-04	3.91E-03	5.70E-03	1.19E-02	1.60E-02	4.34E-02	4.38E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 04 373		0-1.6 km	1.0000	1.50E+01	1.26E+01	2.65E+01	3.05E+01	3.38E+01	3.54E+01	4.25E+01	2.85E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.1-366 of 1.1-373		

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

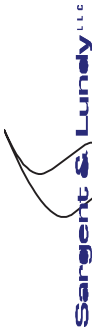
SOURCE TERM 10 OF 10:
Case 9

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:33:53	PAGE 58	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	PEAK	PEAK
QUANTILES											
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	3.60E+03	1.75E+03	1.02E+04	1.13E+04	1.43E+04	1.58E+04	1.58E+04	2.34E+04	9.51E-
06											
CAN FAT/TOTAL	0-16.1 km	1.0000	5.88E+01	5.00E+01	1.16E+02	1.49E+02	2.27E+02	2.53E+02	2.53E+02	4.62E+02	1.64E-
04 217											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	1.27E+03	1.05E+03	2.66E+03	3.34E+03	4.82E+03	5.34E+03	5.34E+03	9.58E+03	1.64E-
04 217											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	8.15E+04	3.87E+04	2.21E+05	2.69E+05	3.24E+05	3.38E+05	3.38E+05	5.32E+05	9.51E-
06 4											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	3.64E-04	1.66E-04	1.03E-03	1.12E-03	1.37E-03	1.50E-03	1.50E-03	2.01E-03	4.85E-
04 59											
CAN FAT/TOTAL	0-16.1 km	0.9719	3.68E-04	2.38E-04	8.48E-04	1.08E-03	1.50E-03	1.74E-03	1.74E-03	2.68E-03	3.81E-
05 147											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.1-367 of 1.1-373		

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related						
L-EDEWBODY 04 95	0-1.6 km	0.0369	1.67E-03	0.00E+00	0.00E+00	4.56E-02	1.03E-01	1.26E-01	3.14E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 217	0-16.1 km	1.0000	1.27E+03	1.05E+03	2.66E+03	4.82E+03	5.34E+03	9.58E+03	1.64E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 147		0.9719	5.10E+02	3.32E+02	1.19E+03	2.30E+03	2.47E+03	3.72E+03	3.81E-
TOTAL INGESTION PATHWAYS DOSE 04 175		1.0000	5.74E+02	3.74E+02	1.22E+03	3.27E+03	3.96E+03	8.95E+03	1.52E-
LONG-TERM GROUNDSHINE DOSE 05 147		0.9719	5.09E+02	3.32E+02	1.19E+03	2.30E+03	2.47E+03	3.71E+03	3.81E-
LONG-TERM RESUSPENSION DOSE 04 94		0.9719	6.77E-01	1.85E-01	1.97E+00	5.52E+00	6.43E+00	9.07E+00	9.70E-
WATER INGESTION DOSE 04 175		0.9945	5.66E+02	3.65E+02	1.22E+03	3.26E+03	3.95E+03	8.95E+03	1.52E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 202		0.9534	1.76E+02	9.81E+01	4.15E+02	1.12E+03	1.30E+03	2.22E+03	1.29E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 237		0.9807	7.98E+00	7.24E+00	1.32E+01	2.26E+01	2.53E+01	4.20E+01	1.52E-
INGESTION OF GRAINS 05 201		0.9993	2.69E-01	2.30E-01	5.06E-01	8.05E-01	8.86E-01	1.69E+00	1.11E-
INGESTION OF LEAF VEG 05 201		0.9993	8.52E-01	7.42E-01	1.49E+00	2.57E+00	2.91E+00	5.37E+00	1.11E-
INGESTION OF ROOT CROPS 05 201		0.9993	5.00E-01	4.33E-01	9.46E-01	1.36E+00	1.51E+00	3.15E+00	1.11E-
INGESTION OF FRUITS 05 201		0.9993	2.54E+00	2.21E+00	4.86E+00	7.59E+00	8.17E+00	1.61E+01	1.11E-
INGESTION OF LEGUMES 05 201		0.9993	1.00E+00	8.79E-01	1.88E+00	3.11E+00	3.34E+00	6.35E+00	1.11E-
INGESTION OF BEEF 04 268		0.9993	1.46E+00	1.18E+00	2.65E+00	5.64E+00	6.86E+00	1.03E+01	8.75E-
INGESTION OF MILK 04 268		0.9993	1.00E+00	8.28E-01	1.79E+00	4.08E+00	5.06E+00	6.77E+00	8.75E-



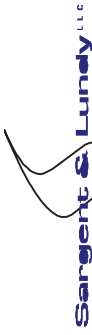
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-368 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

INGESTION OF POULTRY 05 201	0.9993	5.00E-01	4.26E-01	9.35E-01	1.08E+00	1.36E+00	1.51E+00	3.22E+00	1.11E-
INGESTION OF OTHER MEAT CROPS 05 201	0.9993	6.90E-02	5.96E-02	1.23E-01	1.48E-01	2.12E-01	2.28E-01	4.43E-01	1.11E-
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km									
TOTAL LONG-TERM PATHWAYS DOSE 06 4	1.0000	8.15E+04	3.87E+04	2.21E+05	2.69E+05	3.24E+05	3.38E+05	5.32E+05	9.51E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 59	1.0000	6.72E+04	2.94E+04	2.01E+05	2.22E+05	2.80E+05	3.06E+05	3.70E+05	4.85E-
TOTAL INGESTION PATHWAYS DOSE 04 175	1.0000	1.73E+03	1.25E+03	3.37E+03	4.41E+03	6.41E+03	7.20E+03	1.07E+04	1.52E-
LONG-TERM GROUNDSHINE DOSE 04 59	1.0000	6.70E+04	2.94E+04	2.01E+05	2.20E+05	2.73E+05	3.00E+05	3.70E+05	4.85E-
LONG-TERM RESUSPENSION DOSE 06 194	1.0000	2.37E+02	9.51E+01	7.23E+02	8.55E+02	1.03E+03	1.06E+03	1.34E+03	5.66E-
WATER INGESTION DOSE 04 175	1.0000	1.53E+03	1.08E+03	3.22E+03	4.20E+03	6.25E+03	7.10E+03	1.06E+04	1.52E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev. 2	Date
Page 1.1-370 of 1.1-373	

Client PSEG Nuclear Development	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related	
Project PSEG ESPA	Prepared by		
Proj. No 12380-001	Reviewed by		
Equip. No.	Approved by		
			Date

POP.-DEPENDENT DECONTAMINATION COST 04 59	1.0000	1.30E+10	6.21E+09	3.39E+10	4.55E+10	6.04E+10	6.63E+10	8.76E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	1.0000	1.60E+08	1.32E+08	2.72E+08	3.15E+08	3.92E+08	4.30E+08	5.70E+08	3.42E-
POP.-DEPENDENT INTERDICTION COST 06 4	1.0000	5.75E+10	3.14E+10	1.39E+11	1.94E+11	3.05E+11	3.41E+11	6.21E+11	9.51E-
FARM-DEPENDENT INTERDICTION COST 05 4	1.0000	3.30E+08	2.82E+08	5.69E+08	6.68E+08	7.96E+08	8.47E+08	1.16E+09	6.66E-
POP.-DEPENDENT CONDEMNATION COST 05 40	0.9221	9.69E+09	1.91E+09	4.72E+10	5.43E+10	6.66E+10	8.60E+10	1.09E+11	2.37E-
FARM-DEPENDENT CONDEMNATION COST 05 236	0.9710	5.35E+07	3.36E+07	1.18E+08	1.34E+08	1.80E+08	2.05E+08	3.12E+08	3.46E-
EMERGENCY PHASE COST 04 59	1.0000	3.93E+08	1.82E+08	1.04E+09	1.13E+09	1.38E+09	1.50E+09	2.02E+09	4.85E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 04 329	1.0000	6.56E+06	2.83E+06	1.84E+07	2.10E+07	2.41E+07	2.55E+07	3.15E+07	1.81E-
CROP DISPOSAL COST 04 329	1.0000	2.37E+08	2.15E+08	3.25E+08	3.57E+08	4.44E+08	4.87E+08	5.71E+08	1.43E-
AFFECTED AREA/POPULATION 0-80.5 km									
FARM DECONTAMINATION (HECTARES) 04 59	1.0000	7.95E+04	6.47E+04	1.30E+05	1.57E+05	2.06E+05	2.13E+05	2.40E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	1.0000	1.07E+06	4.58E+05	2.97E+06	3.71E+06	5.13E+06	5.28E+06	5.80E+06	4.85E-
FARM INTERDICTION (HECTARES) 04 329	1.0000	9.58E+04	7.95E+04	1.49E+05	1.83E+05	2.16E+05	2.26E+05	2.64E+05	3.52E-
POP. INTERDICTION (INDIVIDUALS) 04 59	1.0000	1.07E+06	4.58E+05	2.97E+06	3.71E+06	5.13E+06	5.28E+06	5.80E+06	4.85E-
FARM CONDEMNATION (HECTARES) 05 236	0.9710	3.48E+03	2.25E+03	7.46E+03	8.24E+03	1.08E+04	1.35E+04	2.42E+04	3.91E-
POP. CONDEMNATION (INDIVIDUALS) 05 40	0.9221	3.47E+04	6.35E+03	1.15E+05	1.69E+05	2.54E+05	2.88E+05	3.91E+05	1.47E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.1-372 of 1.1-373

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
	Date
	Date
	Date

MACCS2 10-JAN-10 17:33:53 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 60

SOURCE TERM 10 OF 10:
Case 9

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-07	1.00E+00	0.00E+00	1.00E-08
2.00E-07	1.00E+00	0.00E+00	2.00E-08
3.00E-07	1.00E+00	0.00E+00	3.00E-08
5.00E-07	1.00E+00	0.00E+00	5.00E-08
7.00E-07	1.00E+00	0.00E+00	7.00E-08
1.00E-06	1.00E+00	0.00E+00	1.00E-07
2.00E-06	1.00E+00	0.00E+00	2.00E-07
3.00E-06	1.00E+00	0.00E+00	3.00E-07
5.00E-06	1.00E+00	0.00E+00	5.00E-07
7.00E-06	1.00E+00	0.00E+00	7.00E-07
1.00E-05	1.00E+00	0.00E+00	1.00E-06
2.00E-05	1.00E+00	0.00E+00	2.00E-06
3.00E-05	1.00E+00	0.00E+00	3.00E-06
5.00E-05	1.00E+00	0.00E+00	5.00E-06
7.00E-05	1.00E+00	0.00E+00	7.00E-06
1.00E-04	1.00E+00	0.00E+00	1.00E-05
2.00E-04	1.00E+00	0.00E+00	2.00E-05
3.00E-04	1.00E+00	0.00E+00	3.00E-05
5.00E-04	1.00E+00	0.00E+00	5.00E-05
7.00E-04	1.00E+00	0.00E+00	7.00E-05
1.00E-03	1.00E+00	0.00E+00	1.00E-04
2.00E-03	1.00E+00	0.00E+00	2.00E-04
3.00E-03	1.00E+00	0.00E+00	3.00E-04
5.00E-03	1.00E+00	0.00E+00	5.00E-04
7.00E-03	1.00E+00	0.00E+00	7.00E-04
1.00E-02	1.00E+00	0.00E+00	1.00E-03
2.00E-02	1.00E+00	0.00E+00	2.00E-03
3.00E-02	1.00E+00	0.00E+00	3.00E-03
5.00E-02	1.00E+00	0.00E+00	5.00E-03
7.00E-02	1.00E+00	0.00E+00	7.00E-03
1.00E-01	1.00E+00	0.00E+00	1.00E-02
2.00E-01	1.00E+00	0.00E+00	2.00E-02
3.00E-01	1.00E+00	0.00E+00	3.00E-02
5.00E-01	1.00E+00	0.00E+00	5.00E-02
7.00E-01	1.00E+00	0.00E+00	7.00E-02
1.00E+00	1.00E+00	0.00E+00	1.00E-01
2.00E+00	1.00E+00	0.00E+00	2.00E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	1.2-1	of 1.2-263

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT I.2
MACCS2 Output File Data (AP1000)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 P1: ATMOS USER INPUT (UNIT 24) = F.INP
 P2: EARLY USER INPUT (UNIT 25) = E.2.INP
 P3: CHRONC USER INPUT (UNIT 26) = E.3.INP
 P4: METEOROLOGY DATA (UNIT 28) = C.INP
 P5: SITE DATA INPUT (UNIT 29) = D.INP
 P6: LIST OUTPUT (UNIT 06) = I.2.OUT

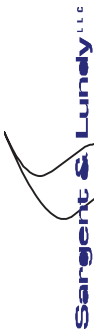
USER INPUT IS READ FROM UNIT 24
 RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.
 THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
 THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

RECORD
 NUMBER

```

*****
* FILE NAME: F.INP
*
* Sargent & Lundy (10/2009)
* The Plume Source Data is Based on Vogtle ESP MACCS2 AP1000 Analysis - See Attachment A.2
*
*****
* Run Identification (RI) Data
*****
* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT
*
1 RIATNAM1001 'AP1000 ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS'
*
* GEOMETRY (GE) DATA
*****

```

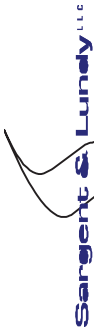


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.2-3 of 1.2-263	
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

*
* NUMBER OF RADIAL SPATIAL ELEMENTS
*
2 GENUMRAD001 10
*
* SPATIAL ENDPOINT DISTANCES IN MILES (MATCHES SITE FILE)
*
* END001 1 2 3 4 5
* END002 10 20 30 40 50
*
* SPATIAL ENDPOINT DISTANCES IN KILOMETERS
*
3 GESPAEND001 1.61 3.22 4.83 6.44 8.05
4 GESPAEND002 16.1 32.2 48.3 64.4 80.5
*
*****
* NUCLIDE DATA
*****
*
* NUMBER OF PSEUDO-STABLE NUCLIDES DEFINED IN THE MODEL
* (USED TO TRUNCATE THE DECAY CHAINS) - USER'S GUIDE PG.C-1
*
5 ISNUMSTB001 27
*
* LIST OF PSEUDO-STABLE NUCLIDES
*
6 ISNAMSTB001 I-129 (daughter of Te-129 and Te-129m)
7 ISNAMSTB002 Xe-131m (daughter of I-131)
8 ISNAMSTB003 Xe-133m (daughter of I-133)
9 ISNAMSTB004 Xe-135m (daughter of I-135)
10 ISNAMSTB005 Cs-135 (daughter of Xe-135 and Xe-135m)
11 ISNAMSTB006 Sm-147 (daughter of Pm-147)
12 ISNAMSTB007 U-234 (daughter of Pu-238)
13 ISNAMSTB008 U-235 (daughter of Pu-239)
14 ISNAMSTB009 U-236 (daughter of Pu-240)

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-4 of 1.2-263

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

15	ISNAMSTB010	U-237	(daughter of Pu-241)
16	ISNAMSTB011	Np-237	(daughter of Am-241)
17	ISNAMSTB012	Rb-87	(daughter of Kr-87)
18	ISNAMSTB013	Ba-137m	(daughter of Cs-137)
19	ISNAMSTB014	Rb-88	(daughter of Kr-88)
20	ISNAMSTB015	Y-91m	(daughter of Sr-91)
21	ISNAMSTB016	Zr-93	(daughter of Y-93)
22	ISNAMSTB017	Nb-93m	(daughter of Zr-93)
23	ISNAMSTB018	Nb-95m	(daughter of Zr-95)
24	ISNAMSTB019	Nb-97	(daughter of Zr-97 and Nb-97m)
25	ISNAMSTB020	Nb-97m	(daughter of Zr-97)
26	ISNAMSTB021	Tc-99	(daughter of Mo-99)
27	ISNAMSTB022	Rh-103m	(daughter of Ru-103)
28	ISNAMSTB023	Rh-106	(daughter of Ru-106)
29	ISNAMSTB024	Te-131	(daughter of Te-131m)
30	ISNAMSTB025	Pr-144	(daughter of Ce-144 and Pr-144m)
31	ISNAMSTB026	Pr-144m	(daughter of Ce-144)
32	ISNAMSTB027	Pm-147	(daughter of Nd-147)

* NUMBER OF RADIOACTIVE NUCLIDES DEFINED IN THE MODEL

* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

33 ISNUMISO001 60

* NUMBER OF CHEMICAL ELEMENT GROUPS DEFINED IN THE MODEL

* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

34 ISMAXGRP001 9

* GROUP 1 - NOBLE GASES

* GROUP 2 - IODINE

* GROUP 3 - CESIUM, RUBIDIUM

* GROUP 4 - TELLURIUM GROUP

* GROUP 5 - STRONTIUM

* GROUP 6 - MOLYBDENUM, COBALT, RUTHENIUM, TECHNETIUM



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-5 of 1.2-263

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

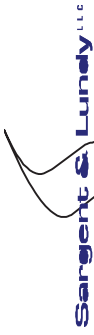
* GROUP 7 - LANTHANUM, YTTRIUM, NEODYMIUM, PROMETHIUM, AMERICIUM, CURIUM
 * GROUP 8 - CERIUM, ACTINIDES (PLUTONIUM, NEPTUNIUM)
 * GROUP 9 - BARIUM

* WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP
 * ALL NUCLIDE GROUPS EXCEPT NOBLE GAS ARE ASSUMED SUBJECT
 * TO BOTH WET AND DRY DEPOSITION.
 * USER'S GUIDE APPENDIX C

	WETDEP	DRYDEP
35	ISDEPFLA001	.FALSE.
36	ISDEPFLA002	.TRUE.
37	ISDEPFLA003	.TRUE.
38	ISDEPFLA004	.TRUE.
39	ISDEPFLA005	.TRUE.
40	ISDEPFLA006	.TRUE.
41	ISDEPFLA007	.TRUE.
42	ISDEPFLA008	.TRUE.
43	ISDEPFLA009	.TRUE.

* CHEMICAL ELEMENT GROUP ASSIGNMENT
 * USER'S GUIDE APPENDIX C

	NUCNAM	IGROUP
44	ISOTGGRP001	Co-58
45	ISOTGGRP002	Co-60
46	ISOTGGRP003	Kr-85
47	ISOTGGRP004	Kr-85m
48	ISOTGGRP005	Kr-87
49	ISOTGGRP006	Kr-88
50	ISOTGGRP007	Rb-86
51	ISOTGGRP008	Sr-89
52	ISOTGGRP009	Sr-90



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-6 of 1.2-263

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
		Approved by		Date	

53	ISOTPGRP010	Sr-91	5			
54	ISOTPGRP011	Sr-92	5			
55	ISOTPGRP012	Y-90	7			
56	ISOTPGRP013	Y-91	7			
57	ISOTPGRP014	Y-92	7			
58	ISOTPGRP015	Y-93	7			
59	ISOTPGRP016	Zr-95	7			
60	ISOTPGRP017	Zr-97	7			
61	ISOTPGRP018	Nb-95	7			
62	ISOTPGRP019	Mo-99	6			
63	ISOTPGRP020	Tc-99m	6			
64	ISOTPGRP021	Ru-103	6			
65	ISOTPGRP022	Ru-105	6			
66	ISOTPGRP023	Ru-106	6			
67	ISOTPGRP024	Rh-105	6			
68	ISOTPGRP025	Sb-127	4			
69	ISOTPGRP026	Sb-129	4			
70	ISOTPGRP027	Te-127	4			
71	ISOTPGRP028	Te-127m	4			
72	ISOTPGRP029	Te-129	4			
73	ISOTPGRP030	Te-129m	4			
74	ISOTPGRP031	Te-131m	4			
75	ISOTPGRP032	Te-132	4			
76	ISOTPGRP033	I-131	2			
77	ISOTPGRP034	I-132	2			
78	ISOTPGRP035	I-133	2			
79	ISOTPGRP036	I-134	2			
80	ISOTPGRP037	I-135	2			
81	ISOTPGRP038	Xe-133	1			
82	ISOTPGRP039	Xe-135	1			
83	ISOTPGRP040	Cs-134	3			
84	ISOTPGRP041	Cs-136	3			
85	ISOTPGRP042	Cs-137	3			
86	ISOTPGRP043	Ba-139	9			
87	ISOTPGRP044	Ba-140	9			



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-7 of 1.2-263

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

88	ISOTPGRP045	Ia-140	7	
89	ISOTPGRP046	Ia-141	7	
90	ISOTPGRP047	Ia-142	7	
91	ISOTPGRP048	Ce-141	8	
92	ISOTPGRP049	Ce-143	8	
93	ISOTPGRP050	Ce-144	8	
94	ISOTPGRP051	Pr-143	7	
95	ISOTPGRP052	Nd-147	7	
96	ISOTPGRP053	Np-239	8	
97	ISOTPGRP054	Pu-238	8	
98	ISOTPGRP055	Pu-239	8	
99	ISOTPGRP056	Pu-240	8	
100	ISOTPGRP057	Pu-241	8	
101	ISOTPGRP058	Am-241	7	
102	ISOTPGRP059	Cm-242	7	
103	ISOTPGRP060	Cm-244	7	
*	*****			
*	* WET DEPOSITION (WD) DATA			
*	*****			
*	* WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR			
*	*****			
104	WDCWASH1001	9.5E-5	*NUREG/CR-4551 PART 7, TABLE 2.9	
*	*****			
*	* WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR			
*	*****			
105	WDCWASH2001	0.8	*NUREG/CR-4551 PART 7, TABLE 2.9	
*	*****			
*	* DRY DEPOSITION (DD) DATA			
*	*****			
*	* NUMBER OF PARTICLE SIZE GROUPS			
*	*****			

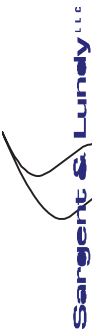


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-8 of 1.2-263

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

106 DDNPSGRP001 1 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
 * DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
 *
 107 DDVDEPOS001 0.01 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
 *
 *
 * DISPERSION PARAMETER (DP) DATA
 *
 *
 * # OF DISTANCES IN PLUME-SIZE TABLES--WHICH CAN BE USED AS AN ALTERNATIVE TO
 * THE POWER-LAW MODEL: (TO UTILIZE THE POWER-LAW MODEL, SET NUM_DIST TO ZERO
 * OR DELETE THE FOLLOWING DATA CARD)
 *
 108 NUM_DIST001 0
 *
 * POWER-LAW FUNCTION IS OF FORM: SIGMA = A * X ** B
 *
 * TADMOR ND GUR PARAMETRIZATION FOR DISTANCE RANGE 0.5 to 5.0 KM
 * (NUREG/CR-4551 PART 7 TABLE 2.4)
 *
 * P-G CLASS: A B C D E F
 109 DPCYSIGA001 0.3658 0.2751 0.2089 0.1474 0.1046 0.0722
 110 DPCYSIGB001 0.9031 0.9031 0.9031 0.9031 0.9031 0.9031
 111 DPCZSIGA001 2.5E-4 1.9E-3 0.2 0.3 0.4 0.2
 112 DPCZSIGB001 2.125 1.6021 0.8543 0.6532 0.6021 0.6020
 *
 * LINEAR SCALING FACTOR FOR SIGMA-Y FUNCTION, NORMALLY 1
 *
 113 DPYSCALE001 1.0
 *
 * LINEAR SCALING FACTOR FOR SIGMA-Z FUNCTION,
 * NORMALLY USED FOR SURFACE ROUGHNESS LENGTH CORRECTION.
 * (Z1 / Z0) ** 0.2, FROM CRAC2 WE HAVE (10 CM / 3 CM) ** 0.2 = 1.27
 * SEE NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.2-9 of 1.2-263
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

114 DPZSCALE001 1.27

* REF/BASIS:

* MACCS COMPUTES SIGMA-Y AND SIGMA-Z AS FOLLOWS:

* SIGMA-Y = A * X ** B

* SIGMA-Z = C * X ** D

* THE SIGMA-Y COEFFICIENTS (A AND B) AND SIGMA-Z COEFFICIENTS (C AND D) ARE TAKEN FROM NUREG-4551, VOL. 2, REV. 1, PART 7, SECTION 2.4.

* NO SIGMA-Y SCALING IS REQUIRED/USED.

* SIGMA-Z SCALING VALUE CONSISTENT WITH SAMPLE PROBLEMS IN

* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

 * PLUME MEANDER EXPANSION FACTOR DATA

* TIME BASE FOR EXPANSION FACTOR (SECONDS)

115 PMTIMBAS001 600.0 * 10 MINUTES

* BREAK POINT FOR FORMULA CHANGE (SECONDS)

116 PMBRKPNT001 3600.0 * 1 HOUR

* EXPONENTIAL EXPANSION FACTOR NUMBER 1

117 PMXPFAC1001 0.2

* EXPONENTIAL EXPANSION FACTOR NUMBER 2



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X	Page	1.2-10 of 1.2-263
Non-Safety Related		Prepared by	Date
Client	PSEG Nuclear Development	Reviewed by	Date
Project	PSEG ESPA	Approved by	Date
Proj. No	12380-001	Equip. No.	

* 118 PMXPFAC2001 0.25
 *
 * REF/BASIS:
 *
 * ABOVE VALUES CONSISTENT WITH SECTION 2.3.2 FROM NUREG/CR-4551.
 *
 *
 *
 * PLUME RISE DATA
 *
 * THE FOLLOWING SCALING FACTORS COULD BE USED TO MODIFY THE MACCS METHOD OF
 * PERFORMING PLUME RISE CALCS (IF DIFFERENT THAN 1).
 *
 * SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A BOUYANT PLUME
 * (USED BY FUNCTION CAUGHT)
 *
 * 119 PRSCLCRW001 1.0
 *
 * SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
 * (USED BY FUNCTION PLMRIS)
 *
 * 120 PRSCLADP001 1.0
 *
 * SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
 * (USED BY FUNCTION PLMRIS)
 *
 * 121 PRSCLEFP001 1.0
 *
 * REF/BASIS:
 *
 * THE SCALING FACTORS CAN BE USED TO MODIFY THE RESULTS OF THE HARD-WIRED
 * PLUME RISE CALCULATIONS PERFORMED BY MACCS. THIS FUNCTIONALITY IS NOT UTILIZED
 * IN THIS ANALYSIS (SCALING FACTORS SET TO 1).



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X Non-Safety Related	Page	1.2-11 of 1.2-263
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

*
* *****
* WAKE EFFECTS DATA
* *****
*
* DETERMINATION OF WAKE EFFECTS HAS BEEN REVISED FOR MACCS2. THE WIDTH VARIABLE
* IS NO LONGER INCLUDED. ADDITIONALLY, VALUES MUST BE INCLUDED FOR EACH PLUME.
*
* VENDOR DATA (ATTACHMENT A.2) :
* BUILDING WIDTH = 39.62 m
* BUILDING HEIGHT = 65.63 m
*
* INITIAL VALUE FOR SIGMA-Y FOR EACH PLUME (4)
*
122 SIGYINIT001 9.21 9.21 9.21 9.21 *INITIAL SIGMA-Y = W/4.3
*
* INITIAL VALUE FOR SIGMA-Z FOR EACH PLUME (4)
*
123 SIGZINIT001 30.53 30.53 30.53 30.53 *INITIAL SIGMA-Z = H/2.15
*
* BUILDING HEIGHT (METERS)
*
124 WEBUILDH001 65.63 65.63 65.63 65.63
*
* *****
* RELEASE DATA (1/2, SEE END OF FILE SECOND PORTION)
* *****
*
* PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP
* UNIFORM SIZE DISTRIBUTION IS ASSUMED FOR ALL 9 CHEMICAL GROUPS
*
125 RDPDIST001 1.0
126 RDPDIST002 1.0
127 RDPDIST003 1.0
128 RDPDIST004 1.0

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-12 of 1.2-263

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

129	RDPSDIST005	1.0	
130	RDPSDIST006	1.0	
131	RDPSDIST007	1.0	
132	RDPSDIST008	1.0	
133	RDPSDIST009	1.0	
*			
*	* AP1000 CORE INVENTORY BASED ON DCD - REV 17		
*	NUCNAM		
*	* THE INVENTORY AS GIVEN BELOW IS IN UNITS OF Ci, IT NEEDS TO BE IN UNITS OF Bq		
*	* VARIABLE RDCORSCA001 IS SET TO 3.7E+10 FOR THE NECESSARY UNIT CONVERSION (Ci to Bq)		
*	* SEE USER'S GUIDE PG. 5-28		
*			
134	RDCORINV001	Co-58	0.00E+00
135	RDCORINV002	Co-60	0.00E+00
136	RDCORINV003	Kr-85	1.06E+06
137	RDCORINV004	Kr-85m	2.63E+07
138	RDCORINV005	Kr-87	5.07E+07
139	RDCORINV006	Kr-88	7.14E+07
140	RDCORINV007	Rb-86	2.29E+05
141	RDCORINV008	Sr-89	9.66E+07
142	RDCORINV009	Sr-90	8.31E+06
143	RDCORINV010	Sr-91	1.20E+08
144	RDCORINV011	Sr-92	1.29E+08
145	RDCORINV012	Y-90	8.66E+06
146	RDCORINV013	Y-91	1.24E+08
147	RDCORINV014	Y-92	1.30E+08
148	RDCORINV015	Y-93	1.49E+08
149	RDCORINV016	Zr-95	1.66E+08
150	RDCORINV017	Zr-97	1.64E+08
151	RDCORINV018	Nb-95	1.67E+08
152	RDCORINV019	Mo-99	1.84E+08
153	RDCORINV020	Tc-99m	1.61E+08
154	RDCORINV021	Ru-103	1.45E+08
155	RDCORINV022	Ru-105	9.83E+07
156	RDCORINV023	Ru-106	4.77E+07



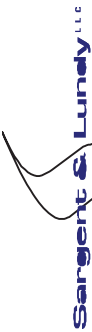
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-13	of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

157	RDCORINV024	Rh-105	9.00E+07
158	RDCORINV025	Sb-127	1.03E+07
159	RDCORINV026	Sb-129	3.10E+07
160	RDCORINV027	Te-127	1.02E+07
161	RDCORINV028	Te-127m	1.32E+06
162	RDCORINV029	Te-129	3.04E+07
163	RDCORINV030	Te-129m	4.50E+06
164	RDCORINV031	Te-131m	1.40E+07
165	RDCORINV032	Te-132	1.38E+08
166	RDCORINV033	I-131	9.63E+07
167	RDCORINV034	I-132	1.40E+08
168	RDCORINV035	I-133	1.99E+08
169	RDCORINV036	I-134	2.18E+08
170	RDCORINV037	I-135	1.86E+08
171	RDCORINV038	Xe-133	1.90E+08
172	RDCORINV039	Xe-135	4.84E+07
173	RDCORINV040	Cs-134	1.94E+07
174	RDCORINV041	Cs-136	5.53E+06
175	RDCORINV042	Cs-137	1.13E+07
176	RDCORINV043	Ba-139	1.78E+08
177	RDCORINV044	Ba-140	1.71E+08
178	RDCORINV045	La-140	1.82E+08
179	RDCORINV046	La-141	1.62E+08
180	RDCORINV047	La-142	1.57E+08
181	RDCORINV048	Ce-141	1.63E+08
182	RDCORINV049	Ce-143	1.52E+08
183	RDCORINV050	Ce-144	1.23E+08
184	RDCORINV051	Pr-143	1.46E+08
185	RDCORINV052	Nd-147	6.48E+07
186	RDCORINV053	Np-239	1.93E+09
187	RDCORINV054	Pu-238	3.83E+05
188	RDCORINV055	Pu-239	3.37E+04
189	RDCORINV056	Pu-240	4.94E+04
190	RDCORINV057	Pu-241	1.11E+07
191	RDCORINV058	Am-241	1.25E+04



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-14 of 1.2-263

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

```

192 RDCORINV059 Cm-242 2.95E+06
193 RDCORINV060 Cm-244 3.62E+05
*
* SCALING FACTOR TO ADJUST THE CORE INVENTORY
*
194 RDCORSCA001 3.7E+10 *SCALING FACTOR FOR CORE INVENTORY (Ci to Bq)
*
* DAUGHTER INGROWTH PRODUCTS RELEASED IN THE SAME PROPORTION AS THE PARENT
*
195 RDAPLFR001 PARENT
*
*****
* OUTPUT CONTROL DATA
*****
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
*
196 OCENDAT1001 .FALSE. *SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC)
*
197 OCIDEBUG001 0 *0 SKIPS DEBUG PRINTING
*
198 TYPE0NUMBER 0 *VALUE = 0 = NO ATMOSPHERIC (TYPE 0) RESULTS PRINTED
*
*****
* METEOROLOGICAL SAMPLING DATA
*****
* METEOROLOGICAL SAMPLING OPTION CODE:
*
* METCOD = 1, USER SPECIFIED DAY AND HOUR IN THE YEAR (FROM MET FILE),
* 2, WEATHER CATEGORY BIN SAMPLING,
* 3, 120 HOURS OF WEATHER SPECIFIED ON THE ATMOS USER INPUT FILE,
* 4, CONSTANT MET (BOUNDARY WEATHER USED FROM THE START),
* 5, STRATIFIED RANDOM SAMPLES FOR EACH DAY OF THE YEAR.
*
* METEOROLOGICAL SAMPLING (M1) DATA
*****

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No.	2009-11222		
Rev.	2	Date	
Page	1.2-15	of	1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

199 M1METCOD001 2 * MET FILE PROVIDED IN ATTACHMENT C
 *
 * LAST SPATIAL INTERVAL FOR MEASURED WEATHER
 *

 * BOUNDARY WEATHER (M2) DATA

 *
 200 M2LIMSPA001 10 * INTERVAL 10 = 50 MILES
 *
 * BOUNDARY WEATHER MIXING LAYER HEIGHT
 *
 201 M2BNDMXH001 1000. * METERS, USER'S GUIDE APPENDIX C
 *
 * BOUNDARY WEATHER STABILITY CLASS INDEX
 *
 202 M2IBDSTB001 4 * D-STABILITY, USER'S GUIDE APPENDIX C
 *
 * BOUNDARY WEATHER RAIN RATE
 *
 203 M2BNDRAN001 5.0 * MM/HR, USER'S GUIDE APPENDIX C
 *
 * BOUNDARY WEATHER WIND SPEED
 *
 204 M2BNDWIND001 5.0 * M/S, USER'S GUIDE APPENDIX C
 *

 * METEOROLOGICAL BIN SAMPLING (M4) DATA

 *
 * NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
 M4NRNINT001 5 * USER'S GUIDE APPENDIX C/NUREG 4551 APPENDIX A
 *
 * ENDPOINTS OF THE RAIN DISTANCE INTERVALS (KILOMETERS)
 *



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.2-16 of 1.2-263	
Non-Safety Related		Prepared by	Date
Client PSEG Nuclear Development		Reviewed by	Date
Project PSEG ESPA		Approved by	Date
Proj. No 12380-001	Equip. No.		

* NOTE: THESE MUST BE CHOSEN TO MATCH THE SPATIAL ENDPOINT DISTANCES
 * SPECIFIED FOR ARRAY SPAEND (10 % ERROR IS ALLOWED)

206	M4RNDSTS001	3.22	8.05	16.1	48.3	80.5	*KM
207	M4NRINTN001	3	* USER'S GUIDE APPENDIX C				
208	M4RNRATE001	2.0	4.0	6.0	* USER'S GUIDE APPENDIX C		
209	M4NSMPLS001	12	*4 MINIMUM, 24 MAXIMUM				
210	M4IRSEED001	79	* INITIAL SEED FOR RANDOM NUMBER GENERATOR FOR WEATHER SAMPLING				
			* RELEASE DATA (2/2)				
			* THIS PORTION OF INPUT IS BASED ON VOGTLE DATA - ATTACHMENT A.2				
			* SOURCE TERM NUMBER 1 OF 6				
211	RDATNAM2001	'CFI'					
212	RDOALARM001	2924.0	* value provided by Westinghouse for all source terms				
213	RDNUMREL001	4	*four plume segments				
214	RDMAXRIS001	1	*first plume segment carries greatest risk				

 * RELEASE DATA (2/2)

 * THIS PORTION OF INPUT IS BASED ON VOGTLE DATA - ATTACHMENT A.2

 * SOURCE TERM NUMBER 1 OF 6



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-17 of 1.2-263

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

215 RDREFTIM001 0.5 0.5 0.5 0.0 *neglects buoyant plume rise
 216 RDPLHEAT001 0.0 0.0 0.0 0.0 *Release height of each plume (meters above grade)
 217 RDPLHITE001 0.0 0.0 0.0 0.0 *Pl dur=Tb149-2 values But lim to 10 hrs
 218 RDPLUDUR001 29666.0 36000.0 36000.0 36000.0 *start at Table 49-2 values
 219 RDPDELAY001 2924.0 32590.0 86420.0 172800.0 LA CE BA
 * XE/KR I CS TE(SB) SR RU(MO) LA CE BA
 220 RDRELFRC001 5.40E-01 3.19E-03 3.18E-03 4.18E-04 2.11E-02 9.11E-03 3.53E-03 2.64E-05 1.62E-02
 221 RDRELFRC002 2.58E-01 1.35E-04 1.35E-04 1.67E-05 6.50E-04 1.68E-04 4.53E-03 1.68E-05 3.40E-04
 222 RDRELFRC003 8.40E-02 0.00E0 0.00E0 4.47E-06 0.00E0 0.00E0 6.00E-03 2.17E-05 0.00E0
 223 RDRELFRC004 3.83E-02 0.00E0 0.00E0 1.57E-06 0.00E0 0.00E0 5.22E-03 1.89E-05 0.00E0

***** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT *****

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ = 518
 NUMBER OF BLANK OR COMMENT RECORDS READ = 294
 NUMBER OF TERMINATOR RECORDS = 1
 NUMBER OF RECORDS PROCESSED = 223
 NUMBER OF PROCESSED RECORDS DUPLICATED = 0
 NUMBER OF PROCESSED RECORDS SORTED = 223

Decay Chain # Ba-139

Decay Chain # Ba-140 La-140

Fraction of Ba-140 going to La-140 in this chain = 1.000000

Decay Chain # Ce-143 Pr-143

Fraction of Ce-143 going to Pr-143 in this chain = 1.000000

Decay Chain # Ce-144



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-18 of 1.2-263

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

Decay Chain # Cm-242 Pu-238
 Fraction of Cm-242 going to Pu-238 in this chain = 1.0000000

Decay Chain # Cm-244 Pu-240
 Fraction of Cm-244 going to Pu-240 in this chain = 1.0000000

Decay Chain # Co-58

Decay Chain # Co-60

Decay Chain # Cs-134

Decay Chain # Cs-136

Decay Chain # Cs-137

Decay Chain # I-133 Xe-133
 Fraction of I-133 going to Xe-133 in this chain = 0.971000

Decay Chain # I-134

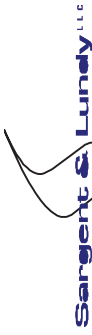
Decay Chain # I-135 Xe-135
 Fraction of I-135 going to Xe-135 in this chain = 0.846000

Decay Chain # Kr-85m Kr-85
 Fraction of Kr-85m going to Kr-85 in this chain = 0.211000

Decay Chain # Kr-87

Decay Chain # Kr-88

Decay Chain # La-141 Ce-141
 Fraction of La-141 going to Ce-141 in this chain = 1.000000



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-19 of 1.2-263

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

Decay Chain # La-142

Decay Chain # Mo-99 Tc-99m
Fraction of Mo-99 going to Tc-99m in this chain = 0.876000

Decay Chain # Nd-147

Decay Chain # Np-239 Pu-239
Fraction of Np-239 going to Pu-239 in this chain = 1.000000

Decay Chain # Pu-241 Am-241
Fraction of Pu-241 going to Am-241 in this chain = 1.000000

Decay Chain # Rb-86

Decay Chain # Ru-103

Decay Chain # Ru-105 Rh-105
Fraction of Ru-105 going to Rh-105 in this chain = 1.000000

Decay Chain # Ru-106

Decay Chain # Sb-127 Te-127
Fraction of Sb-127 going to Te-127 in this chain = 0.824000

Decay Chain # Sb-127 Te-127m Te-127
Fraction of Sb-127 going to Te-127m in this chain = 0.176000
Fraction of Sb-127 going to Te-127 in this chain = 0.171776
Fraction of Te-127m going to Te-127 in this chain = 0.976000

Decay Chain # Sb-129 Te-129
Fraction of Sb-129 going to Te-129 in this chain = 0.775000

Decay Chain # Sb-129 Te-129m Te-129
Fraction of Sb-129 going to Te-129m in this chain = 0.225000



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-20 of 1.2-263

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Fraction of Sb-129 going to Te-129 in this chain = 0.146250
 Fraction of Te-129m going to Te-129 in this chain = 0.650000

- Decay Chain # Sr-89
- Decay Chain # Sr-90 Y-90
- Fraction of Sr-90 going to Y-90 in this chain = 1.000000
- Decay Chain # Sr-91 Y-91
- Fraction of Sr-91 going to Y-91 in this chain = 0.422000
- Decay Chain # Sr-92 Y-92
- Fraction of Sr-92 going to Y-92 in this chain = 1.000000
- Decay Chain # Te-131m I-131
- Fraction of Te-131m going to I-131 in this chain = 0.778000
- Decay Chain # Te-132 I-132
- Fraction of Te-132 going to I-132 in this chain = 1.000000
- Decay Chain # Y-93
- Decay Chain # Zr-95 Nb-95
- Fraction of Zr-95 going to Nb-95 in this chain = 0.993000
- Decay Chain # Zr-97

RELEASED INVENTORY OF ALL PLUMES

Kr-85	2.12E+16	1.01E+16	3.29E+15	1.50E+15
Kr-85m	2.45E+17	2.85E+16	9.19E+14	1.02E+13
Kr-87	6.89E+16	2.28E+14	2.14E+10	2.04E+04
Kr-88	4.28E+17	2.21E+16	1.87E+14	2.44E+11
Rb-86	2.67E+13	1.12E+12	0.00E+00	0.00E+00
Sr-89	7.52E+16	2.30E+15	0.00E+00	0.00E+00

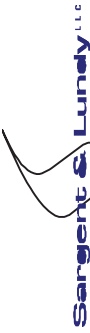


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-21 of 1.2-263

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

	Safety Related	X	Non-Safety Related
Sr-90	2.00E+14		0.00E+00
Sr-91	6.54E+16		0.00E+00
Sr-92	2.85E+16		0.00E+00
Y-90	1.41E+15		9.42E+14
Y-91	1.62E+16		2.33E+16
Y-92	3.85E+16		7.81E+11
Y-93	1.39E+16		7.58E+14
Zr-95	2.16E+16		3.13E+16
Zr-97	1.75E+16		3.60E+15
Nb-95	2.18E+16		3.22E+16
Mo-99	5.89E+16		0.00E+00
Tc-99m	5.36E+16		0.00E+00
Ru-103	4.87E+16		0.00E+00
Ru-105	1.53E+16		0.00E+00
Ru-106	1.61E+16		0.00E+00
Rh-105	2.97E+16		0.00E+00
Sb-127	1.54E+14		4.02E+11
Sb-129	2.17E+14		3.65E+08
Te-127	1.55E+14		4.43E+11
Te-127m	2.04E+13		7.68E+10
Te-129	2.71E+14		1.64E+11
Te-129m	6.96E+13		2.52E+11
Te-131m	1.93E+14		2.39E+11
Te-132	2.04E+15		5.01E+12
I-131	1.12E+16		6.21E+10
I-132	5.34E+15		5.16E+12
I-133	1.99E+16		0.00E+00
I-134	5.21E+14		0.00E+00
I-135	1.31E+16		0.00E+00
Xe-133	3.70E+18		2.01E+17
Xe-135	6.68E+17		1.21E+15
Cs-134	2.28E+15		0.00E+00
Cs-136	6.44E+14		0.00E+00
Cs-137	1.33E+15		0.00E+00
Ba-139	8.93E+15		0.00E+00



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-22 of 1.2-263

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Ba-140	1.01E+17	2.08E+15	0.00E+00	0.00E+00
La-140	3.01E+16	2.44E+16	2.45E+16	1.41E+16
La-141	8.86E+15	2.28E+15	2.16E+14	2.73E+12
La-142	2.23E+15	4.74E+13	7.56E+10	1.36E+06
Ce-141	2.20E+14	2.24E+14	3.04E+14	2.60E+14
Ce-143	1.34E+14	7.03E+13	6.64E+13	3.49E+13
Ce-144	1.20E+14	7.63E+13	9.85E+13	8.56E+13
Pr-143	1.89E+16	2.38E+16	3.05E+16	2.52E+16
Nd-147	8.35E+15	1.05E+16	1.33E+16	1.09E+16
Np-239	1.77E+15	1.01E+15	1.09E+15	7.05E+14
Pu-238	3.76E+11	2.44E+11	3.25E+11	2.95E+11
Pu-239	3.29E+10	2.10E+10	2.72E+10	2.37E+10
Pu-240	4.83E+10	3.07E+10	3.97E+10	3.46E+10
Pu-241	1.08E+13	6.90E+12	8.91E+12	7.76E+12
Am-241	1.63E+12	2.10E+12	2.78E+12	2.41E+12
Cm-242	3.85E+14	4.93E+14	6.52E+14	5.64E+14
Cm-244	4.73E+13	6.07E+13	8.04E+13	6.99E+13

READING FROM A WEATHER FILE WITH THE FOLLOWING HEADER:

SL HC MET 2004 - SHCMET04.inp - Orig: G. Tegarden 7/22/08 Verf: M. Saunders 7/24

DAY HR DRSP S PC - Supporting Calc: SLHC-MET.XLS

METEOROLOGICAL DATA FILE CONTAINS 505 HOURS OF OBSERVED RAIN DATA.

ACCUMULATED RAIN MEASUREMENTS TOTALED 43.71 INCHES FOR THE YEAR.

CONSTANT LID HEIGHTS (M) FOR 4 SEASONS = 1000 1700 1700 1200

NON-ZERO WINDSPEEDS LESS THAN 0.5 M/S ARE SET TO 0.5 M/S

NUMTRI= 390

* * * * * METEOROLOGICAL BIN SUMMARY * * * * *

BIN PRIORITIES

RI XX - RAIN INTENSITY I WITHIN THE INTERVAL ENDING AT XX

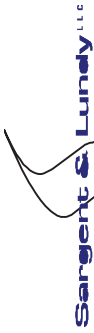
INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5 INTERVAL ENDPOINTS ARE

RAIN INTENSITIES ARE IN MILLIMETERS OF RAIN PER HOUR, THE 3 INTENSITY BREAKPOINTS ARE

S V - INITIAL WEATHER CONDITIONS WITH STABILITY CLASS S AND WIND SPEED INTERVAL

STABILITY CLASSES ARE B = A/B, D = C/D, E = E, AND F = F

3 8 16 48 80
2.0 4.0 6.0



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related		X	Non-Safety Related
Client PSEG Nuclear Development		Prepared by	
Project PSEG ESPA		Reviewed by	
Proj. No 12380-001		Approved by	
Equip. No.		Date	

WIND SPEED INTERVALS ARE IN METERS PER SECOND, 1 (0-1), 2 (1-2), 3 (2-3), 4 (3-5), 5 (5-7), 6 (GT 7)

METBIN	WIND DIRECTION																														TOTAL	PER CENT
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																
1 B	3	0.192	0.000	0.269	0.038	0.115	0.077	0.000	0.038	0.038	0.000	0.000	0.038	0.077	0.000	0.115	26	0.2968														
2 B	4	0.005	0.005	0.027	0.050	0.087	0.092	0.244	0.154	0.062	0.040	0.020	0.002	0.015	0.015	0.100	0.082	402	4.5890													
3 D	1	0.000	0.030	0.061	0.000	0.000	0.061	0.030	0.091	0.091	0.212	0.121	0.091	0.121	0.030	0.000	0.061	33	0.3767													
4 D	2	0.073	0.076	0.055	0.049	0.055	0.067	0.064	0.076	0.076	0.089	0.070	0.064	0.040	0.031	0.034	0.080	327	3.7329													
5 D	3	0.085	0.076	0.118	0.066	0.069	0.055	0.055	0.069	0.070	0.054	0.049	0.054	0.046	0.021	0.040	0.072	669	7.6370													
6 D	4	0.076	0.073	0.072	0.058	0.077	0.062	0.097	0.077	0.050	0.097	0.087	0.022	0.004	0.017	0.051	0.080	1279	14.6005													
7 D	5	0.082	0.071	0.031	0.031	0.068	0.136	0.179	0.058	0.066	0.044	0.025	0.005	0.000	0.011	0.112	0.081	804	9.1781													
8 D	6	0.014	0.007	0.011	0.007	0.032	0.202	0.245	0.097	0.014	0.011	0.007	0.000	0.000	0.007	0.260	0.083	277	3.1621													
9 E	1	0.033	0.054	0.022	0.011	0.087	0.087	0.076	0.043	0.087	0.109	0.076	0.109	0.076	0.054	0.033	0.043	92	1.0502													
10 E	2	0.035	0.046	0.053	0.064	0.059	0.057	0.073	0.064	0.059	0.092	0.088	0.090	0.101	0.031	0.033	0.055	455	5.1941													
11 E	3	0.040	0.047	0.099	0.086	0.066	0.071	0.110	0.079	0.079	0.073	0.076	0.039	0.020	0.037	0.040	0.040	700	7.9909													
12 E	4	0.064	0.092	0.060	0.082	0.073	0.076	0.132	0.080	0.097	0.043	0.019	0.006	0.002	0.021	0.104	0.048	1334	15.2283													
13 F	1	0.083	0.021	0.063	0.021	0.063	0.104	0.042	0.021	0.021	0.125	0.042	0.125	0.042	0.125	0.104	0.000	48	0.5479													
14 F	2	0.055	0.051	0.051	0.051	0.051	0.038	0.025	0.030	0.093	0.101	0.097	0.089	0.105	0.046	0.068	0.051	237	2.7055													
15 F	3	0.022	0.022	0.071	0.045	0.029	0.035	0.071	0.074	0.115	0.074	0.119	0.032	0.006	0.061	0.176	0.048	312	3.5616													
16 F	4	0.018	0.042	0.057	0.084	0.027	0.018	0.066	0.063	0.066	0.057	0.033	0.003	0.000	0.003	0.396	0.066	333	3.8014													
17 R1	3	0.030	0.033	0.033	0.025	0.044	0.033	0.030	0.044	0.072	0.107	0.152	0.140	0.066	0.041	0.083	0.066	363	4.1438													
18 R1	8	0.024	0.000	0.000	0.071	0.024	0.048	0.048	0.048	0.048	0.048	0.119	0.167	0.190	0.024	0.071	0.071	42	0.4795													
19 R1	16	0.030	0.050	0.060	0.100	0.030	0.020	0.020	0.050	0.030	0.080	0.180	0.170	0.050	0.040	0.040	0.050	100	1.1416													
20 R1	48	0.057	0.048	0.063	0.069	0.015	0.021	0.051	0.030	0.021	0.078	0.147	0.141	0.051	0.054	0.078	0.075	333	3.8014													
21 R1	80	0.060	0.075	0.075	0.032	0.024	0.004	0.028	0.032	0.044	0.087	0.127	0.091	0.044	0.063	0.107	0.107	252	2.8767													
22 R2	3	0.053	0.000	0.000	0.039	0.013	0.013	0.053	0.026	0.026	0.158	0.171	0.105	0.039	0.053	0.171	0.079	76	0.8676													
23 R2	8	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.000	0.000	0.333	0.000	3	0.0342													
24 R2	16	0.000	0.100	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.100	0.000	0.300	0.100	0.200	10	0.1142													
25 R2	48	0.063	0.094	0.000	0.063	0.000	0.031	0.000	0.063	0.000	0.000	0.031	0.219	0.063	0.094	0.156	0.125	32	0.3653													
26 R2	80	0.065	0.065	0.097	0.000	0.000	0.000	0.000	0.032	0.000	0.032	0.097	0.290	0.097	0.032	0.161	0.032	31	0.3539													
27 R3	3	0.103	0.034	0.000	0.000	0.000	0.034	0.034	0.034	0.034	0.103	0.103	0.207	0.034	0.069	0.138	0.069	29	0.3311													
28 R3	8	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.333	0.000	3	0.0342													
29 R3	16	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.125	0.125	0.000	0.250	0.000	0.000	8	0.0913													
30 R3	48	0.111	0.148	0.185	0.074	0.000	0.000	0.037	0.000	0.000	0.000	0.111	0.074	0.037	0.000	0.185	0.037	27	0.3082													



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-24 of 1.2-263

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

31	R3	80	0.100	0.033	0.167	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.067	0.000	0.033	0.200	0.200	0.3425
32	R4	3	0.026	0.000	0.026	0.053	0.000	0.026	0.026	0.132	0.079	0.026	0.026	0.105	0.053	0.237	0.158	0.4338
34	R4	16	0.000	0.167	0.000	0.000	0.000	0.000	0.000	0.167	0.167	0.167	0.000	0.000	0.167	0.167	0.000	0.0685
35	R4	48	0.077	0.038	0.000	0.000	0.000	0.038	0.038	0.000	0.077	0.038	0.077	0.038	0.038	0.577	0.077	0.2968
36	R4	80	0.130	0.087	0.000	0.000	0.000	0.087	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.478	0.174	0.2968
37	ALL		0.056	0.059	0.062	0.057	0.058	0.067	0.101	0.069	0.066	0.066	0.046	0.027	0.028	0.099	0.067	0.2626



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related		Rev. 2 Date	
X Non-Safety Related		Page 1.2-25 of 1.2-263	
Client PSEG Nuclear Development		Prepared by	
Project PSEG ESPA		Reviewed by	
Proj. No 12380-001		Approved by	
Equip. No.		Date	

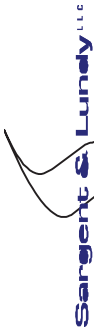
* * * * * METEOROLOGICAL BIN SUMMARY * * * * *

BIN PRIORITIES

RI XX - RAIN INTENSITY I WITHIN THE INTERVAL ENDING AT XX
 INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5 INTERVAL ENDPOINTS ARE 3 8 16 48 80
 RAIN INTENSITIES ARE IN MILLIMETERS OF RAIN PER HOUR, THE 3 INTENSITY BREAKPOINTS ARE 2.0 4.0 6.0

S V - INITIAL WEATHER CONDITIONS WITH STABILITY CLASS S AND WIND SPEED INTERVAL V
 STABILITY CLASSES ARE B = A/B, D = C/D, E = E, AND F = F
 WIND SPEED INTERVALS ARE IN METERS PER SECOND (M/S), 1 (0-1), 2 (1-2), 3 (2-3), 4 (3-5), 5 (5-7), 6 (GT 7)

METBIN	WIND DIRECTION																TOTAL	PER CENT	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
1 B	3	5	0	7	1	3	2	0	1	1	0	0	0	1	2	0	3	26	0.2968
2 B	4	2	2	11	20	35	37	98	62	25	16	8	1	6	6	40	33	402	4.5890
3 D	1	0	1	2	0	0	2	1	3	3	7	4	3	4	1	0	2	33	0.3767
4 D	2	24	25	18	16	18	22	21	25	25	29	23	21	13	10	11	26	327	3.7329
5 D	3	57	51	79	44	46	37	37	46	47	36	33	36	31	14	27	48	669	7.6370
6 D	4	97	94	92	74	99	79	124	99	64	124	111	28	5	22	65	102	1279	14.6005
7 D	5	66	57	25	25	55	109	144	47	53	35	20	4	0	9	90	65	804	9.1781
8 D	6	4	2	3	2	9	56	68	27	4	3	2	0	0	2	72	23	277	3.1621
9 E	1	3	5	2	1	8	8	7	4	8	10	7	10	7	5	3	4	92	1.0502
10 E	2	16	21	24	29	27	26	33	29	27	42	40	41	46	14	15	25	455	5.1941
11 E	3	28	33	69	60	46	50	77	55	55	51	53	27	14	26	28	28	700	7.9909
12 E	4	85	123	80	109	98	102	176	107	129	57	26	8	3	28	139	64	1334	15.2283
13 F	1	4	1	3	1	3	5	2	1	1	6	2	6	2	6	5	0	48	0.5479
14 F	2	13	12	12	12	12	9	6	7	22	24	23	21	25	11	16	12	237	2.7055
15 F	3	7	7	22	14	9	11	22	23	36	23	37	10	2	19	55	15	312	3.5616
16 F	4	6	14	19	28	9	6	22	21	22	19	11	1	0	1	132	22	333	3.8014
17 R1	3	11	12	12	9	16	12	11	16	26	39	55	51	24	15	30	24	363	4.1438
18 R1	8	1	0	0	3	1	2	2	2	2	2	5	7	8	1	3	3	42	0.4795
19 R1	16	3	5	6	10	3	2	2	5	3	8	18	17	5	4	4	5	100	1.1416
20 R1	48	19	16	21	23	5	7	17	10	7	26	49	47	17	18	26	25	333	3.8014
21 R1	80	15	19	19	8	6	1	7	8	11	22	32	23	11	16	27	27	252	2.8767
22 R2	3	4	0	0	3	1	1	4	2	2	12	13	8	3	4	13	6	76	0.8676



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-26 of 1.2-263

	Safety Related	X	Non-Safety Related	Prepared by	Date
Client	PSEG Nuclear Development				
Project	PSEG ESPA				
Proj. No	12380-001			Reviewed by	Date
	Equip. No.			Approved by	Date

23 R2 8	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	3	0.0342
24 R2 16	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	3	1	1	2	10	0.1142						
25 R2 48	2	3	0	2	0	1	0	0	0	0	2	0	0	0	7	2	3	5	4	32	0.3653							
26 R2 80	2	2	3	0	0	0	0	0	0	1	0	0	0	0	9	3	1	5	1	31	0.3539							
27 R3 3	3	1	0	0	0	1	1	1	1	3	3	6	1	2	4	2	2	4	2	29	0.3311							
28 R3 8	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	3	0.0342							
29 R3 16	2	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	8	0.0913							
30 R3 48	3	4	5	2	0	0	1	0	0	0	0	3	2	1	0	0	5	1	27	0.3082								
31 R3 80	3	1	5	0	0	0	3	0	0	0	3	2	0	1	6	6	30	0.3425										
32 R4 3	1	0	1	2	0	1	1	1	1	5	3	1	4	2	9	6	38	0.4338										
33 R4 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0000								
34 R4 16	0	1	0	0	0	0	0	0	1	1	1	1	0	1	1	0	6	0.0685										
35 R4 48	2	1	0	0	0	0	0	1	1	0	0	0	1	1	15	2	26	0.2968										
36 R4 80	3	2	0	0	0	0	2	1	0	0	0	0	0	0	11	4	23	0.2626										

* * * * * SUMMARIES * * * * *

R	74	71	74	62	32	28	51	50	55	120	190	185	81	72	168	119	1432	16.3470
B	7	2	18	21	38	39	98	63	26	16	8	1	7	8	40	36	428	4.8858
D	248	230	219	161	227	305	395	247	196	234	193	92	53	58	265	266	3389	38.6872
E	132	182	175	199	179	186	293	195	219	160	126	86	70	73	185	121	2581	29.4635
F	30	34	56	55	33	31	52	52	81	72	73	38	29	37	208	49	930	10.6164
1	7	7	7	2	11	15	10	8	12	23	13	19	13	12	8	6	173	1.9749
2	54	58	54	57	58	58	60	61	74	95	86	83	84	36	42	63	1023	11.6781
3	96	91	177	119	103	99	136	125	139	110	123	73	48	60	110	94	1703	19.4406
4	165	199	185	218	208	191	279	213	190	200	152	37	14	55	249	174	2729	31.1530
5	91	85	40	36	83	131	245	116	96	51	24	5	0	11	205	100	1319	15.0571
6	4	8	5	4	14	67	108	34	11	3	2	0	0	2	84	35	381	4.3493



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page 1.2-29 of 1.2-263

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development			Prepared by	Date
Project	PSEG ESPA			Reviewed by	Date
Proj. No	12380-001	Equip. No.		Approved by	Date

33	0.052	0.050	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000															
34	0.052	0.050	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000															
35	0.052	0.050	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000															
36	0.052	0.050	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000															
37	0.056	0.059	0.062	0.057	0.058	0.101	0.069	0.066	0.069	0.067	0.046	0.027	0.028	0.099	0.067
1.000000															

***** BEGINNING OF CHANGE CASE 1 USER INPUT *****
 ***** RELEASE DATA BLOCK *****
 * SOURCE TERM NUMBER 2 OF 6
 *

224 RDATNAM2001 'CFE'
 ***** RECORD NUMBER 224 REPLACES RECORD NUMBER 211 *****
 225 RDOALARM001 3004.0
 ***** RECORD NUMBER 225 REPLACES RECORD NUMBER 212 *****
 226 RDNUMREL001 4 *four plume segments
 ***** RECORD NUMBER 226 REPLACES RECORD NUMBER 213 *****
 227 RDMAXRIS001 1 *first plume segment carries greatest risk
 ***** RECORD NUMBER 227 REPLACES RECORD NUMBER 214 *****
 *RDREFTIM001 *defined in source term 1
 *RDPHEAT001 *defined in source term 1
 *RDPLHITE001 *defined in source term 1
 228 RDPLUDUR001 16806.0 36000.0 36000.0 36000.0 *Pl dur=Tbl49-2 values But lim to 10 hrs
 ***** RECORD NUMBER 228 REPLACES RECORD NUMBER 218 *****
 229 RDPDELAY001 3004.0 19810.0 89970.0 176300.0 *start at Table 49-2 seconds after scram
 ***** RECORD NUMBER 229 REPLACES RECORD NUMBER 219 *****
 * XE/KR I CS TE(SB) SR RU(MO) LA CE BA
 230 RDRELFRC001 4.16E-01 5.53E-02 5.37E-02 1.23E-03 3.14E-03 1.16E-02 5.57E-05 9.54E-07 4.63E-03
 ***** RECORD NUMBER 230 REPLACES RECORD NUMBER 220 *****
 231 RDRELFRC002 4.05E-01 1.26E-03 1.21E-03 1.61E-04 3.43E-04 2.58E-03 9.66E-06 4.56E-08 6.45E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X Non-Safety Related	Page	1.2-30 of 1.2-263
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

```

***** RECORD NUMBER 231 REPLACES RECORD NUMBER 221 *****
232 RDRELFRC003 1.08E-01 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
***** RECORD NUMBER 232 REPLACES RECORD NUMBER 222 *****
233 RDRELFRC004 3.43E-02 0.00E0 0.00E0 6.04E-07 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
***** RECORD NUMBER 233 REPLACES RECORD NUMBER 223 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 1 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 1
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0
*****

```

RELEASED INVENTORY OF ALL PLUMES

Kr-85	1.63E+16	1.59E+16	4.24E+15	1.35E+15
Kr-85m	2.48E+17	7.76E+16	1.01E+15	7.89E+12
Kr-87	1.39E+17	2.48E+15	1.61E+10	1.08E+04
Kr-88	5.07E+17	8.24E+16	1.89E+14	1.72E+11
Rb-86	4.53E+14	1.01E+13	0.00E+00	0.00E+00
Sr-89	1.12E+16	1.22E+15	0.00E+00	0.00E+00
Sr-90	9.65E+14	1.05E+14	0.00E+00	0.00E+00
Sr-91	1.11E+16	7.08E+14	0.00E+00	0.00E+00
Sr-92	6.66E+15	1.12E+14	0.00E+00	0.00E+00
Y-90	4.98E+13	1.41E+13	0.00E+00	0.00E+00
Y-91	2.63E+14	4.64E+13	0.00E+00	0.00E+00
Y-92	4.70E+15	3.25E+14	0.00E+00	0.00E+00
Y-93	2.47E+14	2.59E+13	0.00E+00	0.00E+00
Zr-95	3.42E+14	5.91E+13	0.00E+00	0.00E+00
Zr-97	2.97E+14	3.81E+13	0.00E+00	0.00E+00
Nb-95	3.44E+14	5.97E+13	0.00E+00	0.00E+00
Mo-99	7.64E+16	1.57E+16	0.00E+00	0.00E+00
Tc-99m	6.88E+16	1.47E+16	0.00E+00	0.00E+00

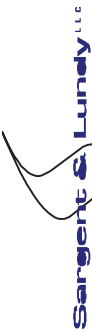


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-31 of 1.2-263

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

	Safety Related	X	Non-Safety Related
Ru-103	6.21E+16		0.00E+00
Ru-105	2.57E+16		0.00E+00
Ru-106	2.05E+16		0.00E+00
Rh-105	3.83E+16		0.00E+00
Sb-127	4.58E+14		1.54E+11
Sb-129	8.49E+14		1.20E+08
Te-127	4.59E+14		1.69E+11
Te-127m	6.01E+13		2.96E+10
Te-129	9.95E+14		6.31E+10
Te-129m	2.05E+14		9.68E+10
Te-131m	5.92E+14		8.99E+10
Te-132	6.11E+15		1.91E+12
I-131	1.95E+17		2.40E+10
I-132	1.14E+17		1.97E+12
I-133	3.66E+17		0.00E+00
I-134	3.64E+16		0.00E+00
I-135	2.73E+17		0.00E+00
Xe-133	2.88E+18		0.00E+00
Xe-135	6.43E+17		1.79E+17
Cs-134	3.85E+16		1.00E+15
Cs-136	1.09E+16		0.00E+00
Cs-137	2.25E+16		0.00E+00
Ba-139	6.20E+15		0.00E+00
Ba-140	2.91E+16		0.00E+00
La-140	1.90E+15		0.00E+00
La-141	1.91E+14		0.00E+00
La-142	7.78E+13		0.00E+00
Ce-141	6.46E+12		0.00E+00
Ce-143	5.02E+12		0.00E+00
Ce-144	4.34E+12		0.00E+00
Pr-143	2.99E+14		0.00E+00
Nd-147	1.32E+14		0.00E+00
Np-239	6.55E+13		0.00E+00
Pu-238	1.35E+10		0.00E+00
Pu-239	1.19E+09		0.00E+00



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

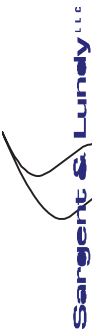
Page 1.2-32 of 1.2-263

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

Pu-240	1.74E+09	8.34E+07	0.00E+00	0.00E+00
Pu-241	3.92E+11	1.87E+10	0.00E+00	0.00E+00
Am-241	2.58E+10	4.47E+09	0.00E+00	0.00E+00
Cm-242	6.08E+12	1.05E+12	0.00E+00	0.00E+00
Cm-244	7.46E+11	1.29E+11	0.00E+00	0.00E+00

***** BEGINNING OF CHANGE CASE 2 USER INPUT *****
 ***** RELEASE DATA BLOCK *****
 * SOURCE TERM NUMBER 3 OF 6
 *

234	RDATNAM2001 'IC'				
*****	RECORD NUMBER	234	REPLACES RECORD NUMBER	211	*****
235	RDOALARM001 4378.0				
*****	RECORD NUMBER	235	REPLACES RECORD NUMBER	212	*****
236	RDNUMREL001 4 *four plume segments				
*****	RECORD NUMBER	236	REPLACES RECORD NUMBER	213	*****
237	RDMAXRIS001 1 *first plume segment carries greatest risk				
*****	RECORD NUMBER	237	REPLACES RECORD NUMBER	214	*****
	*RDREFTIM001 *defined in source term 1				
	*RDPLHEAT001 *defined in source term 1				
	*RDPLHITE001 *defined in source term 1				
238	RDPLUDUR001 36000.0 36000.0 36000.0 *Pl dur=Tbl49-2 values But lim to 10 hrs				
*****	RECORD NUMBER	238	REPLACES RECORD NUMBER	218	*****
239	RDPDELAY001 4378.0 84810.0 134400.0 177600.0 *start at Table 49-2 seconds after scram				
*****	RECORD NUMBER	239	REPLACES RECORD NUMBER	219	*****
	* XE/KR I CS TE(SB) SR RU(MO) LA CE BA				
240	RDRELFRC001 9.83E-04 1.20E-05 1.15E-05 8.04E-07 1.07E-05 1.31E-05 1.35E-06 5.85E-09 1.20E-05				
*****	RECORD NUMBER	240	REPLACES RECORD NUMBER	220	*****
241	RDRELFRC002 4.93E-04 0.00E0 0.00E0 4.83E-09 0.00E0 0.00E0 6.00E-09 3.20E-11 0.00E0				
*****	RECORD NUMBER	241	REPLACES RECORD NUMBER	221	*****
242	RDRELFRC003 3.94E-04 0.00E0 0.00E0 1.21E-09 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0				
*****	RECORD NUMBER	242	REPLACES RECORD NUMBER	222	*****
243	RDRELFRC004 7.72E-04 0.00E0 0.00E0 6.04E-10 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0				
*****	RECORD NUMBER	243	REPLACES RECORD NUMBER	223	*****



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.2-33 of 1.2-263
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 2 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 2
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

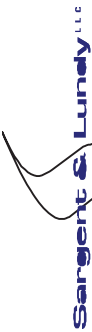
Kr-85	3.86E+13	1.93E+13	1.55E+13	3.03E+13
Kr-85m	3.66E+14	5.78E+12	5.48E+11	1.68E+11
Kr-87	6.23E+13	1.61E+08	7.04E+04	1.99E+02
Kr-88	5.70E+14	1.22E+12	3.39E+10	3.55E+09
Rb-86	9.65E+10	0.00E+00	0.00E+00	0.00E+00
Sr-89	3.81E+13	0.00E+00	0.00E+00	0.00E+00
Sr-90	3.29E+12	0.00E+00	0.00E+00	0.00E+00
Sr-91	3.02E+13	0.00E+00	0.00E+00	0.00E+00
Sr-92	1.04E+13	0.00E+00	0.00E+00	0.00E+00
Y-90	6.19E+11	1.41E+09	0.00E+00	0.00E+00
Y-91	6.22E+12	2.71E+10	0.00E+00	0.00E+00
Y-92	1.73E+13	1.08E+08	0.00E+00	0.00E+00
Y-93	4.86E+12	4.66E+09	0.00E+00	0.00E+00
Zr-95	8.27E+12	3.64E+10	0.00E+00	0.00E+00
Zr-97	6.35E+12	1.13E+10	0.00E+00	0.00E+00
Nb-95	8.34E+12	3.71E+10	0.00E+00	0.00E+00
Mo-99	8.35E+13	0.00E+00	0.00E+00	0.00E+00
Tc-99m	7.67E+13	0.00E+00	0.00E+00	0.00E+00
Ru-103	7.00E+13	0.00E+00	0.00E+00	0.00E+00
Ru-105	1.81E+13	0.00E+00	0.00E+00	0.00E+00
Ru-106	2.31E+13	0.00E+00	0.00E+00	0.00E+00
Rh-105	4.21E+13	0.00E+00	0.00E+00	0.00E+00
Sb-127	2.92E+11	1.49E+09	3.36E+08	1.53E+08



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Client PSEG Nuclear Development	Safety Related	X	Non-Safety Related
Project PSEG ESPA			
Proj. No 12380-001	Equip. No.		
	Prepared by		
	Reviewed by		
	Approved by		

Sb-129	3.40E+11	5.67E+07	1.56E+06	1.13E+05
Te-127	2.96E+11	1.58E+09	3.64E+08	1.69E+08
Te-127m	3.93E+10	2.36E+08	5.92E+07	2.96E+07
Te-129	4.44E+11	5.75E+08	1.29E+08	6.31E+07
Te-129m	1.34E+11	7.91E+08	1.96E+08	9.68E+07
Te-131m	3.61E+11	1.29E+09	2.36E+08	8.92E+07
Te-132	3.89E+12	1.91E+10	4.25E+09	1.91E+09
I-131	4.18E+13	1.38E+08	4.34E+07	2.41E+07
I-132	1.29E+13	1.97E+10	4.37E+09	1.96E+09
I-133	7.18E+13	0.00E+00	0.00E+00	0.00E+00
I-134	7.10E+11	0.00E+00	0.00E+00	0.00E+00
I-135	4.30E+13	0.00E+00	0.00E+00	0.00E+00
Xe-133	6.68E+15	2.96E+15	2.19E+15	4.02E+15
Xe-135	1.11E+15	1.00E+14	2.80E+13	2.19E+13
Cs-134	8.25E+12	0.00E+00	0.00E+00	0.00E+00
Cs-136	2.32E+12	0.00E+00	0.00E+00	0.00E+00
Cs-137	4.81E+12	0.00E+00	0.00E+00	0.00E+00
Ba-139	3.47E+12	0.00E+00	0.00E+00	0.00E+00
Ba-140	7.49E+13	0.00E+00	0.00E+00	0.00E+00
La-140	1.58E+13	2.47E+10	0.00E+00	0.00E+00
La-141	2.70E+12	2.34E+08	0.00E+00	0.00E+00
La-142	4.79E+11	9.24E+04	0.00E+00	0.00E+00
Ce-141	6.21E+10	3.65E+08	0.00E+00	0.00E+00
Ce-143	2.89E+10	9.88E+07	0.00E+00	0.00E+00
Ce-144	2.66E+10	1.45E+08	0.00E+00	0.00E+00
Pr-143	7.20E+12	3.05E+10	0.00E+00	0.00E+00
Nd-147	3.18E+12	1.33E+10	0.00E+00	0.00E+00
Np-239	3.87E+11	1.61E+09	0.00E+00	0.00E+00
Pu-238	8.37E+07	4.70E+05	0.00E+00	0.00E+00
Pu-239	7.30E+06	4.01E+04	0.00E+00	0.00E+00
Pu-240	1.07E+07	5.85E+04	0.00E+00	0.00E+00
Pu-241	2.40E+09	1.31E+07	0.00E+00	0.00E+00
Am-241	6.24E+08	2.78E+06	0.00E+00	0.00E+00
Cm-242	1.47E+11	6.52E+08	0.00E+00	0.00E+00
Cm-244	1.81E+10	8.04E+07	0.00E+00	0.00E+00



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-35 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

***** BEGINNING OF CHANGE CASE 3 USER INPUT *****
***** RELEASE DATA BLOCK *****
* SOURCE TERM NUMBER 4 OF 6
*
244 RDATNAM2001 'BP'
***** RECORD NUMBER 244 REPLACES RECORD NUMBER 211 *****
245 RDOALARM001 31890.0
***** RECORD NUMBER 245 REPLACES RECORD NUMBER 212 *****
246 RDNUMREL001 4 *four plume segments
***** RECORD NUMBER 246 REPLACES RECORD NUMBER 213 *****
247 RDMAXRIS001 1 *first plume segment carries greatest risk
***** RECORD NUMBER 247 REPLACES RECORD NUMBER 214 *****
*RDREFTIM001 *defined in source term 1
*RDPLEHEAT001 *defined in source term 1
*RDPPLHITE001 *defined in source term 1
248 RDPLUDUR001 14550.0 36000.0 36000.0 36000.0 *Pl dur=Tbl49-2 values But lim to 10 hrs
***** RECORD NUMBER 248 REPLACES RECORD NUMBER 218 *****
249 RDPDELAY001 31890.0 46440.0 86490.0 172800.0 *start at Table 49-2 seconds after scram
***** RECORD NUMBER 249 REPLACES RECORD NUMBER 219 *****
* XE/KR I CS TE(SB) SR RU(MO) LA CE BA
250 RDRELFRC001 1.00E0 1.62E-01 1.62E-01 6.27E-03 3.57E-03 4.48E-02 1.30E-04 3.19E-06 8.93E-03
***** RECORD NUMBER 250 REPLACES RECORD NUMBER 220 *****
251 RDRELFRC002 0.00E0 4.64E-02 3.38E-02 3.12E-03 0.00E0 0.00E0 0.00E0 0.00E0 2.00E-06
***** RECORD NUMBER 251 REPLACES RECORD NUMBER 221 *****
252 RDRELFRC003 0.00E0 2.31E-01 6.60E-02 5.32E-03 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
***** RECORD NUMBER 252 REPLACES RECORD NUMBER 222 *****
253 RDRELFRC004 0.00E0 2.80E-03 9.96E-03 1.57E-03 0.00E0 0.00E0 1.00E-06 0.00E0 0.00E0
***** RECORD NUMBER 253 REPLACES RECORD NUMBER 223 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 3 USER INPUT *****

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-36 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

Kr-85	3.92E+16	0.00E+00	0.00E+00	0.00E+00
Kr-85m	1.81E+17	0.00E+00	0.00E+00	0.00E+00
Kr-87	4.99E+15	0.00E+00	0.00E+00	0.00E+00
Kr-88	1.86E+17	0.00E+00	0.00E+00	0.00E+00
Rb-86	1.35E+15	2.79E+14	5.35E+14	7.77E+13
Sr-89	1.27E+16	0.00E+00	0.00E+00	0.00E+00
Sr-90	1.10E+15	0.00E+00	0.00E+00	0.00E+00
Sr-91	7.17E+15	0.00E+00	0.00E+00	0.00E+00
Sr-92	1.05E+15	0.00E+00	0.00E+00	0.00E+00
Y-90	1.59E+14	0.00E+00	0.00E+00	0.00E+00
Y-91	6.18E+14	0.00E+00	0.00E+00	0.00E+00
Y-92	3.24E+15	0.00E+00	0.00E+00	0.00E+00
Y-93	3.40E+14	0.00E+00	0.00E+00	0.00E+00
Zr-95	7.95E+14	0.00E+00	0.00E+00	0.00E+00
Zr-97	5.05E+14	0.00E+00	0.00E+00	0.00E+00
Nb-95	8.03E+14	0.00E+00	0.00E+00	0.00E+00
Mo-99	2.72E+17	0.00E+00	0.00E+00	0.00E+00
Tc-99m	2.55E+17	0.00E+00	0.00E+00	0.00E+00
Ru-103	2.38E+17	0.00E+00	0.00E+00	0.00E+00
Ru-105	2.98E+16	0.00E+00	0.00E+00	0.00E+00
Ru-106	7.90E+16	0.00E+00	0.00E+00	0.00E+00
Rh-105	1.35E+17	0.00E+00	0.00E+00	0.00E+00
Sb-127	2.20E+15	1.04E+15	1.63E+15	4.02E+14
Sb-129	1.26E+15	2.02E+14	5.79E+13	3.65E+11
Te-127	2.26E+15	1.09E+15	1.74E+15	4.43E+14
Te-127m	3.07E+14	1.53E+14	2.60E+14	7.68E+13
Te-129	2.01E+15	5.50E+14	6.28E+14	1.64E+14
Te-129m	1.04E+15	5.16E+14	8.71E+14	2.52E+14



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-37 of 1.2-263

Client	PSEG Nuclear Development		X	Non-Safety Related
Project	PSEG ESPA			
Proj. No	12380-001	Equip. No.		

	Safety Related	X	Non-Safety Related	Prepared by	Date
Te-131m	2.53E+15	1.07E+15	1.41E+15	2.39E+14	
Te-132	2.91E+16	1.36E+16	2.10E+16	5.01E+15	
I-131	5.79E+17	1.55E+17	7.42E+17	8.31E+15	
I-132	6.17E+16	1.50E+16	2.18E+16	5.16E+15	
I-133	8.66E+17	1.88E+17	6.47E+17	3.53E+15	
I-134	2.51E+14	2.67E+11	2.01E+08	1.43E-02	
I-135	3.72E+17	4.89E+16	7.58E+16	7.43E+13	
Xe-133	6.68E+18	2.33E+16	1.54E+17	2.28E+15	
Xe-135	1.09E+18	7.37E+16	2.21E+17	5.96E+14	
Cs-134	1.16E+17	2.42E+16	4.73E+16	7.13E+15	
Cs-136	3.24E+16	6.65E+15	1.27E+16	1.81E+15	
Cs-137	6.77E+16	1.41E+16	2.76E+16	4.16E+15	
Ba-139	2.47E+14	1.62E+09	0.00E+00	0.00E+00	
Ba-140	5.51E+16	1.22E+13	0.00E+00	0.00E+00	
La-140	1.03E+16	3.28E+12	0.00E+00	0.00E+00	
La-141	1.14E+14	0.00E+00	0.00E+00	0.00E+00	
La-142	5.67E+12	0.00E+00	0.00E+00	0.00E+00	
Ce-141	2.24E+13	0.00E+00	0.00E+00	5.75E+12	
Ce-143	1.43E+13	0.00E+00	0.00E+00	1.85E+12	
Ce-144	1.45E+13	0.00E+00	0.00E+00	4.53E+12	
Pr-143	6.87E+14	0.00E+00	0.00E+00	3.58E+11	
Nd-147	3.03E+14	0.00E+00	0.00E+00	0.00E+00	
Np-239	1.99E+14	0.00E+00	0.00E+00	3.73E+13	
Pu-238	4.53E+10	0.00E+00	0.00E+00	1.42E+10	
Pu-239	3.99E+09	0.00E+00	0.00E+00	1.26E+09	
Pu-240	5.83E+09	0.00E+00	0.00E+00	1.83E+09	
Pu-241	1.31E+12	0.00E+00	0.00E+00	4.11E+11	
Am-241	6.01E+10	0.00E+00	0.00E+00	3.98E+06	
Cm-242	1.42E+13	0.00E+00	0.00E+00	0.00E+00	
Cm-244	1.74E+12	0.00E+00	0.00E+00	0.00E+00	



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.2-38 of 1.2-263

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

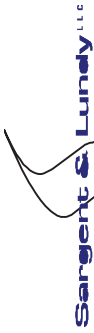
```

*
254 RDATNAM2001 'CI'
***** RECORD NUMBER 254 REPLACES RECORD NUMBER 211 *****
255 RDOALARM001 101.0
***** RECORD NUMBER 255 REPLACES RECORD NUMBER 212 *****
256 RDNUMREL001 4 *four plume segments
***** RECORD NUMBER 256 REPLACES RECORD NUMBER 213 *****
257 RDMAXRIS001 1 *first plume segment carries greatest risk
***** RECORD NUMBER 257 REPLACES RECORD NUMBER 214 *****
*RDREFTIM001 *defined in source term 1
*RDPLHEAT001 *defined in source term 1
*RDPLHITE001 *defined in source term 1
258 RDPLUDUR001 36000.0 36000.0 36000.0 *Pl dur=Tbl49-2 values But lim to 10 hrs
***** RECORD NUMBER 258 REPLACES RECORD NUMBER 218 *****
259 RDPDELAY001 101.0 50020.0 136400.0 211700.0 *start at Table 49-2 seconds after scram
***** RECORD NUMBER 259 REPLACES RECORD NUMBER 219 *****
* XE/KR I CS TE(SB) SR RU(MO) LA CE BA
260 RDRELFRC001 5.73E-01 4.56E-02 2.10E-02 1.64E-03 2.03E-02 4.04E-02 2.39E-04 2.97E-06 3.16E-02
***** RECORD NUMBER 260 REPLACES RECORD NUMBER 220 *****
261 RDRELFRC002 1.13E-01 0.00E0 0.00E0 1.15E-05 0.00E0 0.00E0 1.00E-07 0.00E0 0.00E0
***** RECORD NUMBER 261 REPLACES RECORD NUMBER 221 *****
262 RDRELFRC003 5.66E-02 0.00E0 0.00E0 8.10E-05 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
***** RECORD NUMBER 262 REPLACES RECORD NUMBER 222 *****
263 RDRELFRC004 2.74E-02 0.00E0 0.00E0 1.27E-05 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
***** RECORD NUMBER 263 REPLACES RECORD NUMBER 223 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 4 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 4
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-39 of 1.2-263

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

RELEASED INVENTORY OF ALL PLUMES

Kr-85	2.25E+16	4.43E+15	2.22E+15	1.07E+15
Kr-85m	2.56E+17	5.91E+15	7.23E+13	1.38E+12
Kr-87	6.94E+16	7.14E+12	7.47E+06	4.04E+01
Kr-88	4.44E+17	2.97E+15	4.25E+12	1.25E+10
Rb-86	1.77E+14	0.00E+00	0.00E+00	0.00E+00
Sr-89	7.23E+16	0.00E+00	0.00E+00	0.00E+00
Sr-90	6.24E+15	0.00E+00	0.00E+00	0.00E+00
Sr-91	6.25E+16	0.00E+00	0.00E+00	0.00E+00
Sr-92	2.68E+16	0.00E+00	0.00E+00	0.00E+00
Y-90	4.03E+14	2.61E+10	0.00E+00	0.00E+00
Y-91	1.17E+15	4.55E+11	0.00E+00	0.00E+00
Y-92	3.12E+16	1.19E+10	0.00E+00	0.00E+00
Y-93	9.33E+14	1.51E+11	0.00E+00	0.00E+00
Zr-95	1.46E+15	6.09E+11	0.00E+00	0.00E+00
Zr-97	1.18E+15	2.80E+11	0.00E+00	0.00E+00
Nb-95	1.48E+15	6.18E+11	0.00E+00	0.00E+00
Mo-99	2.61E+17	0.00E+00	0.00E+00	0.00E+00
Tc-99m	2.38E+17	0.00E+00	0.00E+00	0.00E+00
Ru-103	2.16E+17	0.00E+00	0.00E+00	0.00E+00
Ru-105	6.70E+16	0.00E+00	0.00E+00	0.00E+00
Ru-106	7.13E+16	0.00E+00	0.00E+00	0.00E+00
Rh-105	1.31E+17	0.00E+00	0.00E+00	0.00E+00
Sb-127	6.02E+14	3.80E+12	2.24E+13	3.00E+12
Sb-129	8.40E+14	6.36E+11	9.54E+10	5.21E+08
Te-127	6.08E+14	3.98E+12	2.43E+13	3.35E+12
Te-127m	8.01E+13	5.62E+11	3.96E+12	6.21E+11
Te-129	1.05E+15	1.91E+12	8.63E+12	1.31E+12
Te-129m	2.73E+14	1.90E+12	1.31E+13	2.02E+12
Te-131m	7.56E+14	3.85E+12	1.56E+13	1.51E+12
Te-132	8.01E+15	4.97E+13	2.83E+14	3.68E+13
I-131	1.60E+17	2.46E+11	2.92E+12	5.33E+11
I-132	5.83E+16	5.10E+13	2.91E+14	3.80E+13
I-133	2.84E+17	0.00E+00	0.00E+00	0.00E+00



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

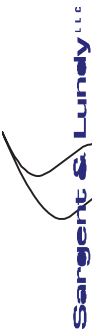
Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-40 of 1.2-263

Client PSEG Nuclear Development	Safety Related	Non-Safety Related
Project PSEG ESPA	X	
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

I-134	6.90E+15	0.00E+00	0.00E+00	0.00E+00
I-135	1.85E+17	0.00E+00	0.00E+00	0.00E+00
Xe-133	3.93E+18	7.16E+17	3.14E+17	1.36E+17
Xe-135	7.64E+17	4.79E+16	3.85E+15	3.78E+14
Cs-134	1.51E+16	0.00E+00	0.00E+00	0.00E+00
Cs-136	4.25E+15	0.00E+00	0.00E+00	0.00E+00
Cs-137	8.78E+15	0.00E+00	0.00E+00	0.00E+00
Ba-139	1.66E+16	0.00E+00	0.00E+00	0.00E+00
Ba-140	1.98E+17	0.00E+00	0.00E+00	0.00E+00
La-140	1.80E+16	4.86E+11	0.00E+00	0.00E+00
La-141	5.90E+14	2.14E+10	0.00E+00	0.00E+00
La-142	1.45E+14	1.19E+08	0.00E+00	0.00E+00
Ce-141	2.21E+13	2.88E+09	0.00E+00	0.00E+00
Ce-143	1.50E+13	0.00E+00	0.00E+00	0.00E+00
Ce-144	1.35E+13	0.00E+00	0.00E+00	0.00E+00
Pr-143	1.28E+15	5.19E+11	0.00E+00	0.00E+00
Nd-147	5.65E+14	2.28E+11	0.00E+00	0.00E+00
Np-239	1.99E+14	0.00E+00	0.00E+00	0.00E+00
Pu-238	4.22E+10	1.86E+05	0.00E+00	0.00E+00
Pu-239	3.71E+09	0.00E+00	0.00E+00	0.00E+00
Pu-240	5.43E+09	3.06E+02	0.00E+00	0.00E+00
Pu-241	1.22E+12	0.00E+00	0.00E+00	0.00E+00
Am-241	1.11E+11	4.62E+07	0.00E+00	0.00E+00
Cm-242	2.61E+13	1.09E+10	0.00E+00	0.00E+00
Cm-244	3.20E+12	1.34E+09	0.00E+00	0.00E+00

***** BEGINNING OF CHANGE CASE 5 USER INPUT *****
 ***** RELEASE DATA BLOCK *****
 * SOURCE TERM NUMBER 6 OF 6
 *

264 RDATA2001 'CFL'
 ***** RECORD NUMBER 264 REPLACES RECORD NUMBER 211 *****
 265 RDOALARM001 2922.0
 ***** RECORD NUMBER 265 REPLACES RECORD NUMBER 212 *****



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.2-41 of 1.2-263

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

266 RDNUMREL001 4 *four plume segments
 ***** RECORD NUMBER 266 REPLACES RECORD NUMBER 213 *****
 267 RDMAXRIS001 3 *third segment is largest noble gas/i/cs release
 ***** RECORD NUMBER 267 REPLACES RECORD NUMBER 214 *****
 *RDREFTIM001 *defined in source term 1
 *RDPLHEAT001 *defined in source term 1
 *RDPLHITE001 *defined in source term 1
 268 RDPLUDUR001 23438.0 36000.0 36000.0 *Pl dur=Tb149-2 values But lim to 10 hrs
 ***** RECORD NUMBER 268 REPLACES RECORD NUMBER 218 *****
 269 RDPDELAY001 2922.0 26360.0 108000.0 194400.0 *start at Table 49-2 seconds after scram
 ***** RECORD NUMBER 269 REPLACES RECORD NUMBER 219 *****
 * XE/KR I CS TE (SB) SR RU (MO) LA CE BA
 270 RDRELFRC001 3.36E-04 1.20E-05 1.15E-05 1.00E-06 1.57E-05 1.68E-05 9.96E-07 7.41E-09 1.61E-05
 ***** RECORD NUMBER 270 REPLACES RECORD NUMBER 220 *****
 271 RDRELFRC002 1.19E-03 5.00E-08 3.23E-08 1.75E-08 1.04E-06 2.90E-07 1.07E-05 4.05E-08 6.60E-07
 ***** RECORD NUMBER 271 REPLACES RECORD NUMBER 221 *****
 272 RDRELFRC003 9.79E-01 2.13E-05 1.16E-05 2.47E-05 2.39E-03 1.26E-03 9.75E-02 3.68E-04 2.25E-03
 ***** RECORD NUMBER 272 REPLACES RECORD NUMBER 222 *****
 273 RDRELFRC004 0.00E0 2.56E-07 1.20E-05 4.42E-04 1.55E-04 4.39E-02 1.66E-04 3.46E-04
 ***** RECORD NUMBER 273 REPLACES RECORD NUMBER 223 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 5 USER INPUT *****

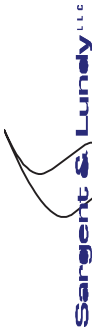
USER INPUT PROCESSING SUMMARY - CHANGE CASE 5

NUMBER OF RECORDS CHANGED = 10

NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

Kr-85	1.32E+13	4.67E+13	3.84E+16	0.00E+00
Kr-85m	1.74E+14	1.72E+14	4.24E+15	0.00E+00
Kr-87	6.87E+13	2.70E+12	9.52E+09	0.00E+00

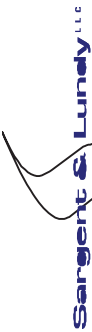


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-42 of 1.2-263

Client PSEG Nuclear Development	Safety Related	Non-Safety Related
Project PSEG ESPA	X	
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

Kr-88	3.29E+14	1.55E+14	5.04E+14	0.00E+00
Rb-86	9.68E+10	2.69E+08	9.31E+10	1.98E+09
Sr-89	5.60E+13	3.69E+12	8.37E+15	1.53E+15
Sr-90	4.83E+12	3.20E+11	7.35E+14	1.36E+14
Sr-91	5.18E+13	1.88E+12	8.26E+14	2.65E+13
Sr-92	2.65E+13	2.12E+11	1.48E+12	5.89E+08
Y-90	5.13E+11	3.04E+12	2.16E+16	7.49E+15
Y-91	4.61E+12	4.88E+13	4.40E+17	1.96E+17
Y-92	2.60E+13	5.37E+12	5.30E+14	2.09E+12
Y-93	4.15E+12	2.53E+13	4.87E+16	4.22E+15
Zr-95	6.11E+12	6.54E+13	5.89E+17	2.63E+17
Zr-97	5.12E+12	3.92E+13	1.41E+17	2.37E+16
Nb-95	6.15E+12	6.61E+13	6.02E+17	2.71E+17
Mo-99	1.10E+14	1.73E+12	5.94E+15	5.68E+14
Tc-99m	9.93E+13	1.63E+12	5.71E+15	5.47E+14
Ru-103	8.99E+13	1.54E+12	6.59E+15	7.96E+14
Ru-105	3.24E+13	1.54E+11	1.94E+13	5.64E+10
Ru-106	2.96E+13	5.11E+11	2.22E+15	2.72E+14
Rh-105	5.51E+13	8.55E+11	2.44E+15	1.88E+14
Sb-127	3.70E+11	6.08E+09	7.24E+12	2.94E+12
Sb-129	5.97E+11	2.78E+09	1.03E+11	1.07E+09
Te-127	3.72E+11	6.27E+09	7.78E+12	3.26E+12
Te-127m	4.89E+10	8.56E+08	1.21E+12	5.87E+11
Te-129	7.24E+11	4.83E+09	2.73E+12	1.25E+12
Te-129m	1.67E+11	2.90E+09	4.02E+12	1.92E+12
Te-131m	4.72E+11	6.82E+09	5.70E+12	1.59E+12
Te-132	4.93E+12	8.01E+10	9.25E+13	3.63E+13
I-131	4.21E+13	1.71E+11	6.77E+13	4.92E+11
I-132	2.18E+13	8.66E+10	9.53E+13	3.74E+13
I-133	7.72E+13	2.44E+11	4.89E+13	0.00E+00
I-134	3.88E+12	2.37E+07	1.65E+02	0.00E+00
I-135	5.39E+13	9.45E+10	3.73E+12	0.00E+00
Xe-133	2.31E+15	7.82E+15	5.68E+18	0.00E+00
Xe-135	4.56E+14	8.33E+14	1.22E+17	0.00E+00
Cs-134	8.25E+12	2.32E+10	8.32E+12	1.83E+11



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Cs-136	2.33E+12	6.43E+09	2.20E+12	4.60E+10
Cs-137	4.81E+12	1.35E+10	4.85E+12	1.07E+11
Ba-139	1.37E+13	8.85E+09	3.36E+08	2.96E+02
Ba-140	1.01E+14	4.06E+12	1.31E+16	1.92E+15
La-140	1.31E+13	5.91E+13	3.66E+17	1.08E+17
La-141	2.91E+12	7.30E+12	1.22E+15	7.96E+12
La-142	9.29E+11	2.44E+11	8.30E+10	7.69E+05
Ce-141	5.99E+10	5.26E+11	5.01E+15	2.21E+15
Ce-143	3.83E+10	1.76E+11	9.92E+14	2.70E+14
Ce-144	3.37E+10	1.84E+11	1.67E+15	7.51E+14
Pr-143	5.33E+12	5.63E+13	4.89E+17	2.09E+17
Nd-147	2.36E+12	2.48E+13	2.13E+17	9.01E+16
Np-239	5.03E+11	2.49E+12	1.71E+16	5.75E+15
Pu-238	1.05E+08	5.87E+08	5.55E+12	2.61E+12
Pu-239	9.25E+06	5.06E+07	4.61E+11	2.09E+11
Pu-240	1.35E+07	7.40E+07	6.73E+11	3.04E+11
Pu-241	3.04E+09	1.66E+10	1.51E+14	6.82E+13
Am-241	4.61E+08	4.95E+09	4.51E+13	2.03E+13
Cm-242	1.09E+11	1.17E+12	1.06E+16	4.74E+15
Cm-244	1.33E+10	1.43E+11	1.31E+15	5.88E+14

USER INPUT IS READ FROM UNIT 25
 RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.
 THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
 THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

RECORD NUMBER RECORD

 * FILE NAME: E.2.INP
 *
 * Sargent & Lundy (10/2009)
 *



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*****
* DOSE CONVERSION FILE DATA
*****
*
* DOSE CONVERSION FACTOR FILENAME
1 DCF_FILE001 'C:\MACCS2\DOSDATA.INP'
*
*****
* MISCELLANEOUS DATA
*****
*
2 DESCRIPTIVE TITLE DESCRIBING THIS "EARLY" INPUT FILE
*
3 MIEANAM1001 'GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS'
*
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
* FALSE ASSIGNED BECAUSE CHRONC IS TO BE RUN AFTER EARLY
*
4 MIENDAT2001 .FALSE.
*
* DISPERSION MODEL OPTION CODE:
* USER'S GUIDE APPENDIC C/NUREG 4551 APPENDIX A
*
* 1 * STRAIGHT LINE
* 2 * WIND-SHIFT WITH ROTATION
* 3 * WIND-SHIFT WITHOUT ROTATION
5 MIIPLUME001 2
*
* NUMBER OF FINE GRID SUBDIVISIONS USED BY THE MODEL
* 3, 5 OR 7 ALLOWED
*
6 MINUMFIN001 7
*
* LEVEL OF DEBUG OUTPUT REQUIRED, NORMAL RUNS SHOULD SPECIFY ZERO (MINIMUM DEBUG OUTPUT)
*
7 MIIPRINT001 0

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*
* LOGICAL FLAG SIGNIFYING THAT THE RISK CONTRIBUTION TABLES ARE NOT TO BE PRINTED
*
* RISBIN
*
8 MIRISCAT001 .FALSE.
*
* FLAG INDICATING WIND-ROSES FROM ATMOS ARE TO USED
*
9 MIOVRRID001 .FALSE.
*
*****
* ORGAN DEFINITION (OD) DATA
*****
*
* ORGANS TO BE USED FOR HEALTH EFFECTS
*
*
* ORGNAM ORGFLG
*
10 MIORGDEF001 'A-SKIN' .TRUE.
11 MIORGDEF002 'A-RED MARR' .TRUE.
12 MIORGDEF003 'A-LUNGS' .TRUE.
13 MIORGDEF004 'A-THYROIDH' .TRUE.
14 MIORGDEF005 'A-STOMACH' .TRUE.
15 MIORGDEF006 'A-LOWER LI' .TRUE.
16 MIORGDEF007 'L-EDEWBODY' .TRUE.
17 MIORGDEF008 'L-RED MARR' .TRUE.
18 MIORGDEF009 'L-BONE SUR' .TRUE.
19 MIORGDEF010 'L-BREAST' .TRUE.
20 MIORGDEF011 'L-LUNGS' .TRUE.
21 MIORGDEF012 'L-THYROID' .TRUE.
22 MIORGDEF013 'L-LOWER LI' .TRUE.
23 MIORGDEF014 'L-BLAD WAL' .TRUE.
24 MIORGDEF015 'L-LIVER' .TRUE.
25 MIORGDEF016 'L-THYROIDH' .TRUE.
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X Non-Safety Related	Page	1.2-46 of 1.2-263
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

 * POPULATION DISTRIBUTION (PD) DATA

 * FLAG INDICATES THAT THE POPULATION DATA IS PROVIDED IN A SEPARATE FILE
 *
 26 PDPOFLG001 FILE
 *

 * SHIELDING AND EXPOSURE (SE) DATA

 * THREE VALUES OF EACH PROTECTION FACTOR ARE SUPPLIED,
 * ONE FOR EACH TYPE OF ACTIVITY:
 *
 * ACTIVITY TYPE:
 * 1 - EVACUEES WHILE MOVING
 * 2 - NORMAL ACTIVITY IN SHELTERING AND EVACUATION ZONE
 * 3 - SHELTERED ACTIVITY
 *
 * CLOUD SHIELDING FACTORS
 *
 * EVACUEES NORMAL SHELTER
 27 SECSFACT001 1. 0.75 0.6
 *
 * PROTECTION FACTORS FOR INHALATION
 *
 * EVACUEES NORMAL SHELTER
 28 SEPROTIN001 1. 0.41 0.33
 *
 * BREATHING RATES (CUBIC METERS PER SECOND)
 *
 * EVACUEES NORMAL SHELTER
 29 SEBRRATE001 2.66E-4 2.66E-4 2.66E-4
 *



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-47 of 1.2-263

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

```

* SKIN PROTECTION FACTORS
*
* EVACUEES NORMAL SHELTER
30 SESKPFAC001 1.0 0.41 0.33
*
* GROUND SHIELDING FACTORS
*
* EVACUEES NORMAL SHELTER
31 SEGSHFAC001 0.5 0.33 0.2
*
* RESUSPENSION INHALATION MODEL CONCENTRATION COEFFICIENT (SEC/METER)
*
32 SERESCON001 1.E-4
*
* RESUSPENSION CONCENTRATION COEFFICIENT HALF-LIFE (SEC)
*
33 SERESHAF001 1.82E5
*
*****
* EVACUATION ZONE DATA BLOCK
*****
*
* SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
*
34 EZEANAM2001 '95% EVACUATION'
*
* THE TYPE OF WEIGHTING TO BE APPLIED TO THE EMERGENCY RESPONSE SCENARIOS
* (A VALUE OF 'TIME' OR 'PEOPLE')
*
35 EZWTNAME001 'PEOPLE'
*
* WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO
* 95% OF PEOPLE EVACUATED
*
36 EZWTFRAC001 0.95

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-48 of 1.2-263

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

* * LAST RING IN THE MOVEMENT ZONE

* * (RING 6 CORRESPONDS TO 60 MILES - NO EXPOSURE AFTER TRAVELING TO 10 MILES)

* *

37 EZLASM0V001 6

* * FLAG DEFINING THE TIME AT WHICH EVACUEES "ENTER" THE DESTINATION ELEMENT

* *

38 TRAVELPOINT 'BOUNDARY'

* *

* * RADIAL EVACUATION SPEED (M/S), SPEED TO EXIT EPZ ONCE TRAVEL BEGINS

* * 95 MIN TRAVEL TIME TO CLEAR EPZ (10 MILES)

* *

39 EZESPEED001 2.8 2.8 2.8

* *

* * EVACUATION IS BASED ON A RADIAL EVACUATION

* *

40 EZEVA001 'RADIAL'

* *

* *THE DURATION (SECONDS) OF THE EARLY PHASE OF EVACUATION (1440 HOURS)

* *

41 EZDURBEG001 86400.0

* *

* *THE DURATION (SECONDS) OF THE MIDDLE PHASE OF EVACUATION

* *

42 EZDURMID001 0.0

* *

* * CONTROL FLAG INDICATING THAT THE INITIATION OF SHELTERING AND

* * EVACUATION ACTIONS WILL OCCUR AT THE OFF-SITE ALARM TIME (ATMOS INPUT VARIABLE)

* *

43 EZREFPNT001 'ALARM'

* *

* * THE NUMBER OF CONCENTRIC RINGS IN WHICH EVACUATION AND/OR SHELTERING CAN OCCUR FOR

* * THE RESIDENT POPULATION

* *



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-49 of 1.2-263

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

44 EZNUMEVA001 6
 *
 * FOR EACH DISTANCE RING IN THE SHELTER/EVACUATION REGION - THE DELAY TO TAKE SHELTER
 * (SECONDS) FOR RESIDENT INDIVIDUALS (65 MIN DELAY)
 *
 45 EZDLTSHL001 3900. 3900. 3900. 3900. 3900. 3900.
 *
 *DELAY FROM SHELTER TO EVAC
 *
 46 EZDLTEVA001 0. 0. 0. 0. 0. 0.
 *
 *
 * SHELTER AND RELOCATION (SR) ZONE DATA
 *
 * DURATION OF THE EMERGENCY PHASE (SECONDS FROM PLUME ARRIVAL)
 * (ONE WEEK)
 *
 47 SRENDEMP001 604800.
 *
 * CRITICAL ORGAN FOR RELOCATION DECISIONS
 * NUREGR 4551, APPENDIX A and HC ER
 * EDEWBODY - EFFECTIVE WHOLE-BODY DOSE EQUIVALENT
 *
 48 SRCRIORG001 'L-EDEWBODY'
 *
 * HOT SPOT RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
 * ONE-HALF DAY, NUREGR 4551, APPENDIX A
 *
 49 SRTIMHOT001 43200.
 *
 * NORMAL RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
 * ONE DAY, NUREGR 4551, APPENDIX A and HC ER
 *
 50 SRTIMNRM001 86400.



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*
* HOT SPOT RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
* (1 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)
* HC ER
*
51 SRDOSHOT001 0.01
*
* NORMAL RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
* (1 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)
* HC ER
*
52 SRDOSNRM001 0.01
*
*****
* EARLY FATALITY (DF) DATA
*****
*
* NUMBER OF EARLY FATALITY EFFECTS
* HC ER
*
53 EFNUMEFA001 3
*
* ORGNAM EFFACA EFFACB EFFTHR
*
54 EFATAGRP001 'A-RED MARR' 3.8 5.0 1.5
55 EFATAGRP002 'A-LUNGS' 10.0 7.0 5.0
56 EFATAGRP003 'A-LOWER LI' 15.0 10.0 8.0
*
*****
* EARLY INJURY MODEL PARAMETERS
*****
*
* NUMBER OF EARLY INJURY EFFECTS
*
57 EINUMEIN001 0

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-51 of 1.2-263

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	Prepared by	Date
Project	PSEG ESPA	Reviewed by		Approved by	Date	Date
Proj. No	12380-001	Equip. No.				

* *****
* LATENT CANCER (LC) PARAMETERS
* *****

* NUMBER OF LATENT CANCER EFFECTS

58 LCNUMACA001 7

* THRESHOLD DOSE FOR APPLYING THE DOSE DEPENDENT REDUCTION FACTOR

59 LCDDTHRE001 0.2 (20 REM, BELOW WHICH DDREFA WILL BE APPLIED)

* DOSE THRESHOLD FOR LINEAR DOSE RESPONSE (SV)
* LINEAR MODEL (QUADRATIC MODEL IS NOT BEING USED)

60 LCACTHRE001 0.0

	ACNAME	ORGNAM	ACSUSC	DOSEFA	DOSEFB	CFRISK	CIRISK	DDREFA
61	LCANCERS001	'LEUKEMIA'	1.0	1.0	0.0	9.70E-3	0.0	2.0
62	LCANCERS002	'BONE'	1.0	1.0	0.0	1.20E-4	0.0	2.0
63	LCANCERS003	'BREAST'	1.0	1.0	0.0	5.40E-3	1.7E-2	1.0
64	LCANCERS004	'LUNG'	1.0	1.0	0.0	1.55E-2	0.0	2.0
65	LCANCERS005	'THYROID'	1.0	1.0	0.0	7.20E-4	7.2E-3	1.0
66	LCANCERS006	'GI'	1.0	1.0	0.0	3.36E-2	0.0	2.0
67	LCANCERS007	'OTHER'	1.0	1.0	0.0	2.76E-2	0.0	2.0

* *****
* RESULT 1 - TOTAL NUMBER OF A GIVEN EFFECT (LATENT CANCER, EARLY DEATH)
* *****
* NUMBER OF DESIRED RESULTS OF THIS TYPE

68 TYPE1NUMBER 5



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-52 of 1.2-263

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

```

*
*      NAME          I1DIS1 I2DIS1
*
69 TYPE1OUT001 'CAN FAT/TOTAL' 1 10 * 0 to 50 miles
70 TYPE1OUT002 'CAN FAT/TOTAL' 1 6 * 0 to 10 miles
71 TYPE1OUT003 'ERL FAT/TOTAL' 1 10 * 0 to 50 miles
72 TYPE1OUT004 'ERL FAT/TOTAL' 1 2 * 0 to 2 miles
73 TYPE1OUT005 'ERL FAT/TOTAL' 1 1 * 0 to 1 miles
*
*****
* RESULT 2 - FURTHEST DISTANCE AT WHICH A GIVEN RISK OF EARLY DEATH IS EXCEEDED
*****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
74 TYPE2NUMBER 0
*
*****
* RESULT 3 - POPULATION EXCEEDING A DOSE THRESHOLD
*****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
75 TYPE3NUMBER 2
*
76 TYPE3OUT001 'L-EDEWBODY' 2.0 * 2 Sv = 200 rem
77 TYPE3OUT002 'L-EDEWBODY' 0.25 * 0.25 Sv = 25 rem
*
*****
* RESULT 4 - AVERAGE INDIVIDUAL RISK
*****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
78 TYPE4NUMBER 0

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.2-53 of 1.2-263	
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

*
*
* RESULT 5 - POPULATION DOSE
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
79 TYPE5NUMBER 2
*
* NAME I1DIS5 I2DIS5
*
80 TYPE5OUT001 'L-EDEWBODY' 1 6 * 0 to 10 miles
81 TYPE5OUT002 'L-EDEWBODY' 1 10 * 0 to 50 miles
*
* RESULT 6 - CENTERLINE DOSE VS. DISTANCE
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
82 TYPE6NUMBER 0
*
* RESULT 7 - CENTERLINE RISK VS. DISTANCE
*
* TYPE7NUMBER 0
*
* RESULT 8 - POPULATION-WEIGHTED RISK
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
84 TYPE8NUMBER 6

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-54 of 1.2-263

Safety Related	X Non-Safety Related
Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

*          NAME          I1DIS8 I2DIS8
*
*          TYPE8OUT001 'ERL FAT/TOTAL' 1 10 *0-50 MILES
*          TYPE8OUT002 'ERL FAT/TOTAL' 1 2  *0- 2 MILES
*          TYPE8OUT003 'ERL FAT/TOTAL' 1 1  *0- 1 MILES
*          TYPE8OUT004 'ERL FAT/TOTAL' 3 3  *2- 3 MILES
*          TYPE8OUT005 'CAN FAT/TOTAL' 1 10 *0-50 MILES
*          TYPE8OUT006 'CAN FAT/TOTAL' 1 6  *0-10 MILES

```

```

*****
* RESULT A - PEAK DOSE AT A DISTANCE
*****

```

```

*          TYPEANUMBER 1
*          NUMA
*          NAME          I1DISA I2DISA
*          TYPEAOUT001 'L-EDEWBODY' 1 1  CCDF

```

```

*****
* RESULT B - PEAK DOSE AT AN (r, theta) LOCATION
*****

```

```

*          TYPEBNUMBER 0
*          TERMINATOR CARD

```

***** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT *****



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No.	2009-11222		
Rev.	2	Date	
Page	1.2-55	of	1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date
Equip. No.		

```

NUMBER OF RECORDS READ = 386
NUMBER OF BLANK OR COMMENT RECORDS READ = 292
NUMBER OF TERMINATOR RECORDS = 1
NUMBER OF RECORDS PROCESSED = 93
NUMBER OF PROCESSED RECORDS DUPLICATED = 0
NUMBER OF PROCESSED RECORDS SORTED = 93
*****
  
```

The list of defined organs is as follows (A- is ACUTE and L- is LIFETIME):

- A-SKIN
- A-RED MARR
- A-LUNGS
- A-THYROIDH
- A-STOMACH
- A-LOWER LI
- L-EDEWBODY
- L-RED MARR
- L-BONE SUR
- L-BREAST
- L-LUNGS
- L-THYROID
- L-LOWER LI
- L-BLAD WAL
- L-LIVER
- L-THYROIDH

Am using a DOSFAC/DOSFAC2/IDCF2 dose factor file

READING FROM A DOSE CONVERSION FILE WITH THE FOLLOWING HEADER:
 MACCS File DOSDATA.INP: Changed by D. CHANIN25-JUN-92, 09:53:47
 Seven new organs added with MACCS Version 1.5.11.1



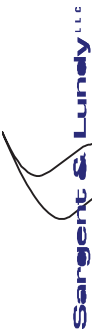
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-56 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

USING THE FOLLOWING SITE DATA FILE:

MACCS2 SITE FILE FOR PSEG ESPA			
Originator: G. Teagarden (7/14/2008) - Population Updated by S&L 10/2009			
10 SPATIAL INTERVALS	6.4374	8.0467	16.0935 32.1869 48.2804
16 WIND DIRECTIONS			
7 CROP CATEGORIES			
4 WATER PATHWAY ISOTOPES			
2 WATERSHEDS			
63 ECONOMIC REGIONS			
SPATIAL DISTANCES	KILOMETERS		
1.6093	3.2187	4.8280	6.4374 8.0467 16.0935 32.1869 48.2804
64.3739	80.4674		
POPULATION			
0.	0.	170.	362. 200986. 177866.
448847.	363839.	50.	8729. 27634. 187239.
0.	0.		
951522.	1053252.	2.	9. 9. 67. 5174. 14923. 171366.
0.	0.		
696849.	709835.	19.	50. 312. 1875. 7485. 79517.
0.	0.		
168204.	78672.	14.	47. 42. 1631. 37292. 107168.
0.	0.		
41884.	87062.	0.	0. 4. 539. 28321. 34813.
0.	0.		
14908.	28408.	0.	0. 0. 9. 135. 895.
0.	0.		
56.	47396.	0.	0. 0. 10. 256. 2592.
0.	0.		
2693.	19048.	0.	0. 0. 5. 190. 23209. 136055.
0.	0.		
62733.	54529.	0.	0. 6. 828. 33333. 26456.
0.	0.		
26232.	39908.		



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-57 of 1.2-263

Client	PSEG Nuclear Development		Safety Related	X	Non-Safety Related	Prepared by	Date
Project	PSEG ESPA					Reviewed by	Date
Proj. No	12380-001		Equip. No.			Approved by	Date

0.	0.	2.	9.	11.	2398.	6341.	12703.
14398.	23676.						
0.	0.	2.	22.	208.	5766.	8588.	6352.
18349.	32002.						
0.	0.	3.	181.	436.	19211.	15582.	15301.
71710.	242510.						
0.	0.	70.	220.	373.	5284.	78925.	106793.
90311.	37500.						
0.	0.	0.	164.	227.	3551.	165975.	93291.
74425.	67892.						
0.	0.	0.	118.	37.	2432.	179067.	163291.
220746.	138597.						

LAND FRACTION

1.00	0.95	0.30	0.25	0.25	0.40	0.75	0.92	0.99	1.00
1.00	1.00	0.93	0.97	1.00	0.95	0.95	0.85	0.95	0.99
1.00	1.00	0.99	0.96	0.95	0.99	0.99	0.99	0.98	0.98
1.00	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.95	0.95	0.97	1.00	1.00	1.00	0.99	0.98	1.00	0.99
0.03	0.25	0.50	0.65	0.75	1.00	0.98	0.99	0.92	0.95
0.01	0.00	0.00	0.00	0.00	0.33	0.35	0.30	0.03	0.40
0.01	0.00	0.00	0.00	0.00	0.03	0.50	0.25	0.35	0.40
0.01	0.00	0.03	0.45	0.60	0.97	0.99	0.99	0.99	0.99
0.01	0.00	0.45	0.97	0.92	1.00	1.00	1.00	1.00	0.99
0.01	0.00	0.50	0.92	0.95	0.98	1.00	0.98	0.97	0.75
0.01	0.00	0.45	0.92	0.92	0.99	0.97	0.93	0.75	0.25
0.01	0.00	0.15	0.92	0.92	0.99	0.93	0.40	0.80	0.90
0.01	0.00	0.00	0.70	0.97	0.99	0.93	0.90	0.90	0.90
0.15	0.00	0.01	0.25	0.85	0.99	1.00	1.00	1.00	0.99
0.95	0.30	0.01	0.10	0.35	0.75	0.90	1.00	1.00	0.99

REGION INDEX

1	2	2	2	2	4	5	6
1	2	2	2	2	7	8	9
1	2	2	2	21011	1213		
1	2	2	21415	161718			
1	2	2	21920	202122			



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page 1.2-58 of 1.2-263

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

- 1 2 2 2 22320202422
- 1 2 3 3 32626262627
- 1 3 3 3 32826262930
- 1 3 3 3 33132333435
- 1 3 3 3 336373839
- 1 3 3 3 340414243
- 1 3 3 3 344454647
- 1 3 3 3 348495051
- 1 2 3 3 3 352535455
- 1 2 2 3 3 3 3565758
- 1 2 2 2 35960616263

WATERSHED INDEX

- 1 1 2 2 1 1 1 1 1
- 1 1 1 1 1 1 1 1 1
- 1 1 1 1 1 1 1 1 1
- 1 1 1 1 1 1 1 1 1
- 1 1 1 1 1 1 1 1 1
- 1 1 1 1 1 1 1 1 1
- 2 2 1 1 1 1 1 1 1
- 2 2 2 2 2 2 2 2 1
- 2 2 2 2 2 1 2 1 1
- 2 2 2 1 1 1 1 1 1
- 2 2 2 1 1 1 1 1 1
- 2 2 2 1 1 1 1 1 1
- 2 2 2 1 1 1 1 1 1
- 2 2 2 1 1 1 1 1 1
- 2 2 2 1 1 1 1 1 1
- 2 2 2 1 1 1 1 1 1
- 2 2 2 1 1 1 1 1 1
- 1 2 2 2 1 1 1 1 1

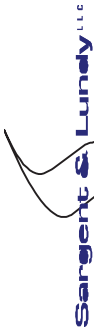
CROP SEASON AND SHARE

- 1 PASTURE 90. 270. 0.4100
- 2 STORED FORAGE 150. 240. 0.1300
- 3 GRAINS 150. 240. 0.2100
- 4 GRN LEAFY VEGETABLES 150. 240. 0.0020
- 5 OTHER FOOD CROPS 150. 240. 0.0040
- 6 LEGUMES AND SEEDS 150. 240. 0.1500



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

7 ROOTS AND TUBERS	150.	240.	0.0030						
WATERSHED DEFINITION -- INITIAL AND ANNUAL WASHOFF AND INGESTION FACTORS									
1 Sr-89			5.00E-06	0.0					
2 Sr-90			5.00E-06	0.0					
3 Cs-134			5.00E-06	0.0					
4 Cs-137			5.00E-06	0.0					
REGIONAL ECONOMIC DATA									
01 EXCLUSION	0.45	0.090	1861.3	13673.7	235830.7				
02 SALEM	0.45	0.090	1861.3	13673.7	235830.7				
03 N_CASTLE	0.26	0.079	0948.0	19736.6	303569.3				
04 N-20	0.20	0.037	2157.6	20444.1	277602.8				
05 N-30	0.05	0.017	1958.8	18162.9	307006.4				
06 N-40	0.13	0.100	1964.7	26183.0	351488.1				
07 NNE-20	0.25	0.036	3144.9	26457.8	247747.7				
08 NNE-30	0.12	0.013	2768.2	26733.3	250181.2				
09 NNE-40	0.11	0.026	1981.1	22799.4	265861.5				
10 NE-10	0.44	0.086	1981.3	13740.5	233949.1				
11 NE-20	0.32	0.056	2672.0	21747.8	243357.2				
12 NE-30	0.16	0.016	3403.4	29136.5	253768.9				
13 NE-40	0.15	0.027	3187.8	23824.1	271205.3				
14 ENE-5	0.43	0.083	2101.4	13807.3	232067.4				
15 ENE-10	0.25	0.020	4021.7	14876.9	201961.4				
16 ENE-20	0.29	0.035	3504.3	16494.4	215132.8				
17 ENE-30	0.13	0.007	5595.6	19080.4	237336.0				
18 ENE-40	0.09	0.003	6164.9	18356.6	245615.2				
19 E-5	0.30	0.036	3541.6	14609.5	209487.9				
20 CUMBERLAND	0.23	0.012	4261.8	15010.6	198198.1				
21 E-30	0.17	0.007	4389.2	16606.7	223788.3				
22 E-40	0.07	0.000	4218.1	19155.6	265936.7				
23 ESE-5	0.32	0.044	3301.6	14475.8	213251.2				
24 ESE-30	0.19	0.009	3888.5	16201.6	218896.0				
25 CAPE_MAY	0.06	0.000	2768.8	19774.4	280989.8				
26 KENT_DE	0.49	0.088	1714.9	10388.2	200707.0				
27 SE-40	0.43	0.014	3906.0	13360.2	224540.9				
28 SES-5	0.38	0.084	1331.5	15062.4	252138.1				



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-60 of 1.2-263

Client	PSEG Nuclear Development		X	Non-Safety Related	Prepared by	Date
Project	PSEG ESPA				Reviewed by	Date
Proj. No	12380-001				Approved by	Date

	Safety Related	Non-Safety Related							
29 SES-30	0.49	0.078	2062.6	10727.1	203341.3				
30 SES-40	0.47	0.023	3800.6	12421.5	216512.7				
31 S-5	0.27	0.079	0986.4	19269.2	298426.2				
32 S-10	0.46	0.087	1599.9	11790.5	216136.3				
33 S-20	0.50	0.082	1767.9	10159.8	199201.7				
34 S-30	0.52	0.063	1926.8	09474.5	194685.8				
35 S-40	0.53	0.036	2423.0	09700.5	203968.5				
36 SWS-10	0.40	0.103	1231.4	15426.4	272836.0				
37 SWS-20	0.63	0.085	1270.4	09569.8	270201.8				
38 SWS-30	0.63	0.064	1347.3	09240.4	264682.3				
39 SWS-40	0.63	0.064	1166.0	10030.4	290197.2				
40 SW-10	0.43	0.125	1256.5	15562.8	286509.2				
41 SW-20	0.65	0.171	1368.6	09985.2	279459.4				
42 SW-30	0.66	0.167	1334.9	09820.8	280989.8				
43 SW-40	0.64	0.187	1402.0	10172.6	279384.1				
44 WSW-10	0.32	0.089	1760.8	18256.9	257908.5				
45 WSW-20	0.39	0.123	1997.0	16311.0	242353.7				
46 WSW-30	0.33	0.313	0853.2	14611.5	278480.9				
47 WSW-40	0.23	0.201	1473.6	17532.4	294788.4				
48 W-10	0.31	0.088	1635.7	18484.6	264933.2				
49 CECIL	0.35	0.095	2198.4	17460.1	233321.9				
50 W-30	0.31	0.245	1284.0	15950.9	262675.3				
51 W-40	0.33	0.298	1003.5	15264.2	269449.1				
52 WNW-10	0.28	0.083	1260.6	19167.5	286007.4				
53 WNW-20	0.35	0.104	3199.1	21168.5	276223.0				
54 WNW-30	0.45	0.182	4643.1	25326.0	304823.7				
55 WNW-40	0.66	0.316	4437.0	22199.0	233321.9				
56 NW-20	0.32	0.107	3724.6	25741.9	345818.1				
57 NW-30	0.36	0.132	5511.6	29619.0	372035.5				
58 NW-40	0.52	0.230	5161.0	26449.5	304823.7				
59 NWN-5	0.41	0.088	1678.7	14886.2	249378.4				
60 NWN-10	0.31	0.082	1176.3	18220.9	286634.7				
61 NWN-20	0.23	0.072	2025.2	21198.8	320127.6				
62 NWN-30	0.30	0.107	4966.1	27892.5	366917.4				
63 NWN-40	0.33	0.128	5161.7	29958.4	338693.0				



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-61 of 1.2-263

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

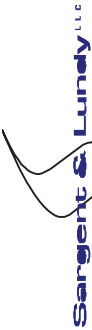
END
*23456789012345678901234567890123456789012345678901234567890 - alignment
*

POPULATION

```

***** BEGINNING OF CHANGE CASE 1 USER INPUT *****
*
*****
* EMERGENCY RESPONSE SCENARIO NUMBER 2
*****
*
*****
*EVACUATION ZONE DATA BLOCK
*****
* SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
*
94 EZEANAM2001 'NO EVACUATION'
***** RECORD NUMBER 94 REPLACES RECORD NUMBER 34 *****
*
* WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO
* 5% OF PEOPLE RELOCATED (NO EVACUATION)
*
95 EZWTFRAC001 0.05
***** RECORD NUMBER 95 REPLACES RECORD NUMBER 36 *****
*
* LAST RING IN THE MOVEMENT ZONE
* A ZERO TURNS OFF THE EVACUATION MODEL
*
96 EZLASMOV001 0
***** RECORD NUMBER 96 REPLACES RECORD NUMBER 37 *****
*
***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 1 USER INPUT *****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X Non-Safety Related	Page	1.2-62 of 1.2-263
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

USER INPUT PROCESSING SUMMARY - CHANGE CASE 1
 NUMBER OF RECORDS CHANGED = 3
 NUMBER OF RECORDS ADDED = 0

NO EVACUATION REQUESTED

***** WARNING -- THE FOLLOWING RECORDS WERE NEVER ACCESSED *****

DESCRIPTIVE TITLE DESCRIBING THIS "EARLY" INPUT FILE

USER INPUT IS READ FROM UNIT 26
 RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.
 THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
 THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

RECORD NUMBER RECORD

* FILE NAME E.3.INP

* Sargent & Lundy (10/2009)

* DESCRIPTIVE TITLE DESCRIBING THIS "CHRONC" INPUT FILE

* 1 CHCHNAME001 'GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS'

* ECONOMIC DATA USED: 2009 CPI, 2002 CENSUS OF AGRICULTURE, 2005 BEA & BLS DATA



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*
* *****
* EMERGENCY RESPONSE COST DATA
* *****
*
* EMERGENCY PHASE - DAILY COST FOR PERSON RELOCATED ($/PERSON-DAY)
*
2 CHEVACST001 53.19 * 27.00 * 1.97
*
* INTERMEDIATE PHASE - DAILY COST FOR PERSON RELOCATED ($/PERSON-DAY)
*
3 CHRELCST001 53.19 * 27.00 * 1.97
*
* *****
* LONG TERM PROTECTIVE ACTION DATA
* *****
*
4 DUR_INTPHAS 0.0 *(in seconds) (no intermediate phase)
*
* LONG-TERM PHASE DOSE PROJECTION PERIOD, THE DURATION OF THE EXPOSURE
* PERIOD OVER WHICH THE LONG-TERM DOSE CRITERION IS EVALUATED (SECONDS)
*
5 CHTMPACT001 1.58E8 * seconds (5 YEARS)
*
* DOSE CRITERION FOR INTERMEDIATE PHASE RELOCATION (Sv) (YEAR 0-0.5)
*
6 CHDSCRTI001 1.0E5 (NO INTERMEDIATE PHASE RELOCATION)
*
* DOSE CRITERION FOR LONG-TERM PHASE RELOCATION (Sv) * (YEAR 0.5-5)
*
7 CHDSCRILT001 0.03 (3 REM)
*
* CRITICAL ORGAN NAME FOR LONG-TERM ACTIONS
*
8 CHCRTOCR001 'L-EDEWBODY'

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X Non-Safety Related	Page 1.2-64 of 1.2-263	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

*
 * LONG TERM EXPOSURE PERIOD
 *
 9 CHEXPTIM001 1.58E9 * (50 YEARS PER EPA STANDARD DEFAULT EXPONENTIAL FACTORS)
 *

 * DECONTAMINATION PLAN DATA BLOCK

 *
 * NUMBER OF LEVELS OF DECONTAMINATION
 *
 10 CHLVLDEC001 2
 *
 * DECONTAMINATION TIMES CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
 * (SECONDS)
 *
 11 CHTIMDEC001 5.184E6 1.0368E7 (60, 120 DAYS)
 *
 * DOSE REDUCTION FACTORS CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
 *
 12 CHDSRFCT001 3. 15.
 *
 * COST OF FARM DECONTAMINATION PER FARMLAND UNIT AREA (DOLLARS/HECTARE)
 * FOR THE VARIOUS LEVELS OF DECONTAMINATION
 *
 13 CHCDFRM0001 1109. 2463.
 *
 * COST OF NONFARM DECONTAMINATION PER RESIDENT PERSON (DOLLARS/PERSON)
 * FOR THE VARIOUS LEVELS OF DECONTAMINATION
 *
 14 CHCDNFRM001 5910. 15760.
 *
 * FRACTION OF FARMLAND DECONTAMINATION COST DUE TO LABOR
 * FOR THE VARIOUS DECONTAMINATION LEVELS
 *



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-65 of 1.2-263

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
Prepared by		Date
Reviewed by		Date
Approved by		Date

15 CHFRFDL0001 .3 .35
 *
 * FRACTION OF NON-FARM DECONTAMINATION COST DUE TO LABOR
 * FOR THE VARIOUS DECONTAMINATION LEVELS
 *

16 CHFRNFDL001 .7 .5
 *
 * FRACTION OF TIME WORKERS IN FARM AREAS SPEND IN CONTAMINATED AREAS
 * FOR THE VARIOUS DECONTAMINATION LEVELS
 *

17 CHTFWKF0001 .10 .33
 *
 * FRACTION OF TIME WORKERS IN NON-FARM AREAS SPEND IN CONTAMINATED AREAS
 * FOR THE VARIOUS DECONTAMINATION LEVELS
 *

18 CHTFWKNF001 .33 .33
 *
 * AVERAGE COST OF DECONTAMINATION LABOR (DOLLARS/MAN-YEAR)
 *

19 CHDLBCST001 68950.
 *

 * INTERDICTION COST DATA BLOCK

 *

* DEPRECIATION (DETERIORATION) RATE DURING INTERDICTION PERIOD (PER YEAR)
 *

20 CHDPRATE001 .20 *(NUREG/CR-4551 PART 7 TABLE 5.1)
 *
 * INVESTMENT INCOME RETURN (DISCOUNT RATE) DURING INTERDICTION PERIOD (PER YEAR)
 * THIS VALUE SHOULD BE DERIVED AS A REAL RETURN RATE ADJUSTED FOR INFLATION.
 *

21 CHDSRATE001 .07 *(NEI 05-01)
 *
 * POPULATION RELOCATION COST (DOLLARS/PERSON)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.2-66	of 1.2-263
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* 22 CHPOPCST001 9850.
 * *****
 * GROUNDSHINE WEATHERING DEFINITION DATA BLOCK
 * *****
 * * NUMBER OF TERMS IN THE GROUNDSHINE WEATHERING RELATIONSHIP (EITHER 1 OR 2)
 *
 * 23 CHNGWTRM001 2
 * *
 * * GROUNDSHINE WEATHERING COEFFICIENTS
 * *
 * CHGWCOEF001 0.5 0.5
 * *
 * * HALF LIVES CORRESPONDING TO THE GROUNDSHINE WEATHERING COEFFICIENTS (S)
 * *
 * 25 CHTGWHLF001 1.6E7 2.8E9
 * *
 * * *****
 * * RESUSPENSION WEATHERING DEFINITION DATA BLOCK
 * * *****
 * *
 * * NUMBER OF TERMS IN THE RESUSPENSION WEATHERING RELATIONSHIP
 * *
 * 26 CHNRWTRM001 3
 * *
 * * RESUSPENSION CONCENTRATION COEFFICIENTS (/ METER)
 * * RELATIONSHIP BETWEEN GROUND CONCENTRATION AND INSTANTANEOUS AIR CONC.
 * *
 * 27 CHRWCOEF001 1.0E-5 1.0E-7 1.0E-9 * (SAMPLE PROBLEM A, JON HELTON)
 * *
 * * HALF-LIVES CORRESPONDING TO THE RESUSPENSION CONCENTRATION COEFFICIENTS (S)
 * *
 * 28 CHTRWHLF001 1.6E7 1.6E8 1.6E9 * (6 MONTHS, 5 YEARS, 50 YEARS)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.2-67 of 1.2-263	
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
Prepared by		Date	
Reviewed by		Date	
Approved by		Date	

*
 *
 * REGIONAL CHARACTERISTICS DATA
 *
 * FRACTION OF AREA THAT IS LAND IN THE REGION
 *
 29 CHFRACLD001 0.95 * (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
 * FRACTION OF LAND DEVOTED TO FARMING IN THE REGION
 *
 30 CHFRCFRM001 0.382 * (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
 * AVERAGE VALUE OF ANNUAL FARM PRODUCTION IN THE REGION (DOLLARS/HECTARE)
 * (CASH RECEIPTS FROM FARMING PLUS VALUE OF HOME CONSUMPTION)/(LAND IN FARMS)
 *
 31 CHFRMPRD001 371.0 * (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
 * FRACTION OF FARM PRODUCTION RESULTING FROM DAIRY PRODUCTION IN THE REGION
 * (VALUE OF MILK PRODUCED)/(CASH RECEIPTS FROM FARMING PLUS HOME CONSUMPTION)
 *
 32 CHDPPFRCT001 0.198 * (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
 * VALUE OF FARM WEALTH (DOLLARS/HECTARE)
 * (AVERAGE VALUE PER HECTARE OF FARM LAND AND BUILDINGS TO 50 MILES)
 *
 33 CHVALWF0001 16636.
 * FRACTION OF FARM WEALTH IN IMPROVEMENTS FOR THE REGION
 *
 34 CHFRFIM0001 0.25 * SURRY & PEACH BOTTOM (NUREG/CR-4551 PART 7, TABLE 5.4)
 * NON-FARM WEALTH, PROPERTY AND IMPROVEMENTS FOR THE REGION (DOLLARS/PERSON)
 * THE VALUE OF ALL RESIDENTIAL, BUSINESS, AND PUBLIC ASSETS WHICH WOULD BE
 * LOST IN THE EVENT OF PERMANENT INTERDICTION (CONDEMNATION) OF THE AREA



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-68 of 1.2-263

Safety Related		X	Non-Safety Related
Client PSEG Nuclear Development			
Project PSEG ESPA			
Proj. No 12380-001		Equip. No.	
Prepared by		Date	
Reviewed by		Date	
Approved by		Date	

```

*
35 CHVALWNF001 275924.
*
* FRACTION OF NON-FARM WEALTH IN IMPROVEMENTS FOR THE REGION
*
36 CHFRNFIM001 0.8
*
*****
* FOOD INGESTION MODEL
*****
*
*NEW COMIDA2-BASED FOOD INGESTION MODEL
*
37 CHFDPATH001 'NEW'
*
* FILE PATH OF THE COMIDA2 FILE
*
38 BIN_FILE001 'C:\MACCS2\SAMP_A.BIN'
*
* THE MAXIMUM ALLOWABLE FOOD INGESTION DOSE FROM MILK CROPS
*
* EFFECTIVE THYROID (SV)
39 DOSEMILK001 0.0025
40 DOSEOTHR001 0.0025
*
* EFFECTIVE THYROID (SV)
41 DOSELONG001 0.005
*
* NUMBER OF NUCLIDES IN THE WATER INGESTION PATHWAY MODEL
*
42 CHNUMWPI001 4
*
* TABLE OF NUCLIDE DEFINITIONS IN THE WATER INGESTION PATHWAY MODEL
*
* IF A SITE DATA FILE IS DEFINED, THE DATA DEFINING THE WATERSHED INGESTION

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-69 of 1.2-263

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No 12380-001	Equip. No.	
Prepared by	Date	
Reviewed by	Date	
Approved by	Date	

```

* * FACTOR IS SUPERSEDED BY THE CORRESPONDING DATA IN THE SITE DATA FILE
* *
* * INITIAL ANNUAL WASHOFF WASHOFF ANNUAL WASHOFF INGESTION FACTOR
* * FRACTION RATE (Bq INGESTED) / (Bq IN WATER)
* *
* * NAMWPI WSHRFTA WSHRFTA WINGF
* * CHWTRISO001 Sr-89 0.01 0.004 0.004 5.0E-6
* * CHWTRISO002 Sr-90 0.01 0.004 0.004 5.0E-6
* * CHWTRISO003 Cs-134 0.005 0.001 0.001 5.0E-6
* * CHWTRISO004 Cs-137 0.005 0.001 0.001 5.0E-6
* *
* * SPECIAL OPTIONS DATA BLOCK
* *
* * DETAILED PRINT OPTION CONTROL SWITCHES, LOOK AT THE CODE BEFORE TURNING ON!!
* * KSWDSC
* *
* * CHKSWTCH001 0
* *
* * POPULATION DOSE RESULTS
* * DEFINE THE TYPE 9 RESULTS
* * LONG-TERM POPULATION DOSE IN A GIVEN REGION BROKEN DOWN BY THE 12 PATHWAYS
* *
* * NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* * FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
* *
* * TYPE9NUMBER 2 (UP TO 10 ALLOWED)
* *
* * ORGNAM INNER OUTER
* * TYPE9OUT001 'L-EDEWBODY' 1 6 (0-10 MILES)

```



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related

X Non-Safety Related

Page 1.2-70 of 1.2-263

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date

```

50 TYPE9OUT002 'L-EDEWBODY' 1 10 (0-50 MILES)
*
*
* ECONOMIC COST RESULTS
*
* ECONOMIC COST RESULTS IN A REGION BROKEN DOWN BY 12 TYPES OF COSTS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
*
51 TYP10NUMBER 1 * (UP TO 10 ALLOWED)
*
* INNER OUTER
*
52 TYP10OUT001 1 10 *(0-50 MILES)
*
* ACTION DISTANCE RESULTS
*
* DEFINE A FLAG THAT CONTROLS THE PRODUCTION OF THE ACTION DISTANCE RESULTS
*
* SPECIFYING A VALUE OF .TRUE. TURNS ON ALL 8 OF THE ACTION DISTANCE RESULTS,
* A VALUE OF .FALSE. WILL ELIMINATE THE ACTION DISTANCE RESULTS FROM THE OUTPUT.
*
53 TYP11FLAG11 .FALSE.
*
* IMPACTED AREA/POPULATION RESULTS
*
* IMPACTED AREA/POPULATION RESULTS IN A REGION BROKEN DOWN BY 6 TYPES OF IMPACTS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.2-71 of 1.2-263
Non-Safety Related		Prepared by	Date
Client	PSEG Nuclear Development	Reviewed by	Date
Project	PSEG ESPA	Approved by	Date
Proj. No	12380-001	Equip. No.	

* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 8

54 TYP12NUMBER 1 (UP TO 10 ALLOWED)

* INNER OUTER

55 TYP12OUT001 1 10 (0-50 MILES)

* MAXIMAL ANNUAL FOOD INGESTION DOSE TO AN INDIVIDUAL

* MAXIMAL ANNUAL FOOD INGESTION DOSE TO AN INDIVIDUAL

* This result is calculated after accounting for temporary or permanent interdiction. It is only available for the "new" food model.

* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED

56 TYP13NUMBER 0 (UP TO 10 ALLOWED)

***** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT *****

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ = 314
 NUMBER OF BLANK OR COMMENT RECORDS READ = 257
 NUMBER OF TERMINATOR RECORDS = 1
 NUMBER OF RECORDS PROCESSED = 56
 NUMBER OF PROCESSED RECORDS DUPLICATED = 0
 NUMBER OF PROCESSED RECORDS SORTED = 56



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.2-72	of	1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

COMIDA2 binary file header =
 COMIDA2 01/14/2004 13:06:02 Version 1.11.1, 01/12/2004
 COMIDA2 descriptive title =
 MACCS File DOSDATA.INP: Changed by D. CHANIN25-JUN-92, 09:53:47
 Seven new organs added with MACCS Version 1.5.11.1

A SITE DATA FILE IS BEING USED FOR BOTH "EARLY" AND "CHRONC"

7 CANCER EFFECTS ARE DEFINED IN THE MODEL.

INDEX	CANCER EFFECT	ORGAN	ALPHA	BETA	CFRISK	CIRISK
1	LEUKEMIA	L-RED MARR	1.000E+00	0.000E+00	9.700E-03	0.000E+00
2	BONE	L-BONE SUR	1.000E+00	0.000E+00	1.200E-04	0.000E+00
3	BREAST	L-BREAST	1.000E+00	0.000E+00	5.400E-03	1.700E-02
4	LUNG	L-LUNGS	1.000E+00	0.000E+00	1.550E-02	0.000E+00
5	THYROID	L-THYROIDH	1.000E+00	0.000E+00	7.200E-04	7.200E-03
6	GI	L-LOWER LI	1.000E+00	0.000E+00	3.360E-02	0.000E+00
7	OTHER	L-EDEWBODY	1.000E+00	0.000E+00	2.760E-02	0.000E+00

TIME OF HOTSPOT RELOCATION IS 4.3200E+04.

TIME OF NORMAL RETURN IS 8.640E+04 AND THE EMERGENCY PHASE ENDS AT 6.048E+05.

GROUNDSHINE SHIELDING FACTOR = 0.330

RESUSPENSION PROTECTION FACTOR = 0.410

BREATHING RATE (CUBIC M/S) = 2.660E-04

DISPERSION MODEL FLAG IS 2

WINDROSE PROBABILITIES BY WIND DIRECTION AND MET BIN NUMBER



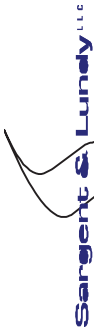
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Rev. 2	Date
Page 1.2-73 of 1.2-263	

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

BIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	0.1923	0.0000	0.2692	0.0385	0.1154	0.0769	0.0000	0.0385	0.0385	0.0000	0.0000	0.0000	0.0385	0.0769	0.0000	0.1154
2	0.0050	0.0050	0.0274	0.0498	0.0871	0.0920	0.2438	0.1542	0.0622	0.0398	0.0199	0.0025	0.0149	0.0149	0.0995	0.0821
3	0.0000	0.0303	0.0606	0.0000	0.0000	0.0606	0.0303	0.0909	0.0909	0.2121	0.1212	0.0909	0.1212	0.0303	0.0000	0.0606
4	0.0734	0.0765	0.0550	0.0489	0.0550	0.0673	0.0642	0.0765	0.0765	0.0887	0.0703	0.0642	0.0398	0.0306	0.0336	0.0795
5	0.0852	0.0762	0.1181	0.0658	0.0688	0.0553	0.0553	0.0688	0.0703	0.0538	0.0493	0.0538	0.0463	0.0209	0.0404	0.0717
6	0.0758	0.0735	0.0719	0.0579	0.0774	0.0618	0.0970	0.0774	0.0500	0.0970	0.0868	0.0219	0.0039	0.0172	0.0508	0.0797
7	0.0821	0.0709	0.0311	0.0311	0.0684	0.1356	0.1791	0.0585	0.0659	0.0435	0.0249	0.0050	0.0000	0.0112	0.1119	0.0808
8	0.0144	0.0072	0.0108	0.0072	0.0325	0.2022	0.2455	0.0975	0.0144	0.1018	0.0072	0.0000	0.0000	0.0072	0.2599	0.0830
9	0.0326	0.0543	0.0217	0.0109	0.0870	0.0870	0.0761	0.0435	0.0870	0.1087	0.0761	0.1087	0.0761	0.0543	0.0326	0.0435
10	0.0352	0.0462	0.0527	0.0637	0.0593	0.0571	0.0725	0.0637	0.0593	0.0923	0.0879	0.0901	0.1011	0.0308	0.0330	0.0549
11	0.0400	0.0471	0.0986	0.0857	0.0657	0.0714	0.1100	0.0786	0.0786	0.0729	0.0757	0.0386	0.0200	0.0371	0.0400	0.0400
12	0.0637	0.0922	0.0600	0.0817	0.0735	0.0765	0.1319	0.0802	0.0967	0.0427	0.0195	0.0060	0.0022	0.0210	0.1042	0.0480
13	0.0833	0.0208	0.0625	0.0208	0.0625	0.1042	0.0417	0.0208	0.0208	0.1250	0.0417	0.1250	0.0417	0.1250	0.1042	0.0000
14	0.0549	0.0506	0.0506	0.0506	0.0506	0.0380	0.0253	0.0295	0.0928	0.1013	0.0970	0.0886	0.1055	0.0464	0.0675	0.0506
15	0.0224	0.0224	0.0705	0.0449	0.0288	0.0353	0.0705	0.0737	0.1154	0.0737	0.1186	0.0321	0.0064	0.0609	0.1763	0.0481
16	0.0180	0.0420	0.0571	0.0841	0.0270	0.0180	0.0661	0.0631	0.0661	0.0571	0.0330	0.0030	0.0000	0.0030	0.3964	0.0661
17	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
18	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
19	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
20	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
21	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
22	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
23	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
24	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
25	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
26	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
27	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
28	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
29	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
30	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
31	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
32	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
33	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
34	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-74 of 1.2-263

Safety Related		X	Non-Safety Related
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

Prepared by	Date
Reviewed by	Date
Approved by	Date

35	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
36	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
37	0.0561	0.0592	0.0619	0.0568	0.0581	0.0672	0.1015	0.0693	0.0659	0.0687	0.0674	0.0459	0.0274	0.0283	0.0989	0.0675
38	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
39	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
40	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
41	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Processing a Site Data File with Header: MACCS2 SITE FILE FOR PSEG ESPA
 Originator: G. Teagarden (7/14/2008) - Population Updated by S&L 10/2009



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.2-75 of 1.2-263
Non-Safety Related		Prepared by	
		Reviewed by	
		Approved by	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

THIS PROGRAM CURRENTLY ALLOWS THE GENERATION OF UP TO 394 RESULTS

YOU HAVE REQUESTED 16 RESULTS FROM "EARLY" COMPOSED OF:

- 5 RESULTS OF TYPE 1
- 0 RESULTS OF TYPE 2
- 2 RESULTS OF TYPE 3
- 0 RESULTS OF TYPE 4
- 2 RESULTS OF TYPE 5
- 0 RESULTS OF TYPE 6
- 0 RESULTS OF TYPE 7
- 6 RESULTS OF TYPE 8
- 1 RESULTS OF TYPE A
- 0 RESULTS OF TYPE B

YOU HAVE REQUESTED 55 RESULTS FROM "CHRONC" COMPOSED OF:

- 34 RESULTS OF TYPE 9
- 13 RESULTS OF TYPE 10
- 0 RESULTS OF TYPE 11
- 8 RESULTS OF TYPE 12
- 0 RESULTS OF TYPE 13

TRIAL	DAY	HOUR	BIN	PRBMET
1	152	7	18	4.00E-04



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-76 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001 Equip. No.	Approved by
	Date
	Date
	Date

WARNING!! WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

For Julian Day 152, selecting COMIDA2 results # 4 of 9
 2 152 13 24 1.14E-04

For Julian Day 152, selecting COMIDA2 results # 4 of 9
 3 152 18 21 2.40E-03

For Julian Day 152, selecting COMIDA2 results # 4 of 9
 4 153 4 3 3.14E-04

For Julian Day 153, selecting COMIDA2 results # 4 of 9
 5 153 7 26 2.95E-04

For Julian Day 153, selecting COMIDA2 results # 4 of 9
 6 153 9 26 2.95E-04

For Julian Day 153, selecting COMIDA2 results # 4 of 9
 7 153 12 25 3.04E-04

For Julian Day 153, selecting COMIDA2 results # 4 of 9
 8 153 14 25 3.04E-04

For Julian Day 153, selecting COMIDA2 results # 4 of 9
 9 154 24 9 8.75E-04

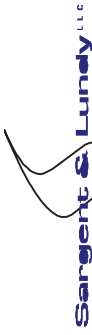
For Julian Day 154, selecting COMIDA2 results # 4 of 9
 10 155 17 6 1.22E-02

For Julian Day 155, selecting COMIDA2 results # 4 of 9
 11 156 20 26 2.95E-04

For Julian Day 156, selecting COMIDA2 results # 4 of 9
 12 156 23 26 2.95E-04

For Julian Day 156, selecting COMIDA2 results # 4 of 9
 13 157 2 25 3.04E-04

For Julian Day 157, selecting COMIDA2 results # 4 of 9
 14 157 3 24 1.14E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related	
----------------	---	--------------------	--

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-77	of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 157, selecting COMIDA2 results # 4 of 9
 15 157 4 22 7.23E-04

For Julian Day 157, selecting COMIDA2 results # 4 of 9
 16 157 17 27 2.76E-04

For Julian Day 157, selecting COMIDA2 results # 4 of 9
 17 157 18 27 2.76E-04

For Julian Day 157, selecting COMIDA2 results # 4 of 9
 18 157 19 22 7.23E-04

For Julian Day 157, selecting COMIDA2 results # 4 of 9
 19 158 17 4 3.11E-03

For Julian Day 158, selecting COMIDA2 results # 4 of 9
 20 159 7 3 3.14E-04

For Julian Day 159, selecting COMIDA2 results # 4 of 9
 21 159 11 1 2.47E-04

For Julian Day 159, selecting COMIDA2 results # 4 of 9
 22 160 7 10 4.33E-03

For Julian Day 160, selecting COMIDA2 results # 4 of 9
 23 160 14 12 1.27E-02

For Julian Day 160, selecting COMIDA2 results # 4 of 9
 24 162 12 36 2.19E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 25 162 14 36 2.19E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 26 162 15 35 2.47E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 27 162 17 34 1.14E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 28 162 18 32 3.61E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 29 162 20 19 9.51E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 30 162 24 20 3.17E-03

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 31 163 14 17 3.45E-03

For Julian Day 163, selecting COMIDA2 results # 4 of 9



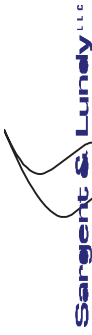
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-78 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

32	For Julian Day 163, selecting COMIDA2 results # 4 of 9	19	18	4.00E-04
33	For Julian Day 166, selecting COMIDA2 results # 4 of 9	10	7	7.65E-03
34	For Julian Day 166, selecting COMIDA2 results # 4 of 9	16	36	2.19E-04
35	For Julian Day 166, selecting COMIDA2 results # 4 of 9	18	36	2.19E-04
36	For Julian Day 166, selecting COMIDA2 results # 4 of 9	19	35	2.47E-04
37	For Julian Day 166, selecting COMIDA2 results # 4 of 9	12	5	6.36E-03
38	For Julian Day 167, selecting COMIDA2 results # 5 of 9	21	15	2.97E-03
39	For Julian Day 167, selecting COMIDA2 results # 5 of 9	4	11	6.66E-03
40	For Julian Day 168, selecting COMIDA2 results # 5 of 9	7	31	2.85E-04
41	For Julian Day 169, selecting COMIDA2 results # 5 of 9	10	31	2.85E-04
42	For Julian Day 169, selecting COMIDA2 results # 5 of 9	11	31	2.85E-04
43	For Julian Day 169, selecting COMIDA2 results # 5 of 9	13	30	2.57E-04
44	For Julian Day 169, selecting COMIDA2 results # 5 of 9	15	29	1.14E-04
45	For Julian Day 169, selecting COMIDA2 results # 5 of 9	16	28	1.14E-04
46	For Julian Day 169, selecting COMIDA2 results # 5 of 9	18	30	2.57E-04
47	For Julian Day 169, selecting COMIDA2 results # 5 of 9	20	29	1.14E-04
48	For Julian Day 169, selecting COMIDA2 results # 5 of 9	21	27	2.76E-04
49	For Julian Day 169, selecting COMIDA2 results # 5 of 9	16	8	2.64E-03



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

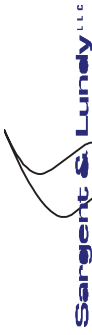
Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-79 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001 Equip. No.	Approved by
	Date
	Date
	Date

For Julian Day 173, selecting COMIDA2 results # 5 of 9
 50 174 16 25 3.04E-04
 For Julian Day 174, selecting COMIDA2 results # 5 of 9

TRIAL	DAY	HOUR	BIN	PRBMET
51	174	17	24	1.14E-04
For Julian Day 174, selecting COMIDA2 results # 5 of 9				
52	174	18	23	1.14E-04
For Julian Day 174, selecting COMIDA2 results # 5 of 9				
53	177	11	36	2.19E-04
For Julian Day 177, selecting COMIDA2 results # 5 of 9				
54	177	13	35	2.47E-04
For Julian Day 177, selecting COMIDA2 results # 5 of 9				
55	177	14	35	2.47E-04
For Julian Day 177, selecting COMIDA2 results # 5 of 9				
56	180	21	36	2.19E-04
For Julian Day 180, selecting COMIDA2 results # 5 of 9				
57	180	23	35	2.47E-04
For Julian Day 180, selecting COMIDA2 results # 5 of 9				
58	180	24	34	1.14E-04
For Julian Day 180, selecting COMIDA2 results # 5 of 9				
59	183	8	5	6.36E-03
For Julian Day 183, selecting COMIDA2 results # 5 of 9				
60	183	13	26	2.95E-04
For Julian Day 183, selecting COMIDA2 results # 5 of 9				
61	183	15	25	3.04E-04
For Julian Day 183, selecting COMIDA2 results # 5 of 9				
62	183	16	22	7.23E-04
For Julian Day 183, selecting COMIDA2 results # 5 of 9				
63	183	17	32	3.61E-04
For Julian Day 183, selecting COMIDA2 results # 5 of 9				
64	185	15	4	3.11E-03
For Julian Day 185, selecting COMIDA2 results # 5 of 9				
65	186	11	2	3.82E-03



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-80 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 186, selecting COMIDA2 results # 5 of 9
66 186 15 8 2.64E-03

For Julian Day 186, selecting COMIDA2 results # 5 of 9
67 187 2 31 2.85E-04

For Julian Day 187, selecting COMIDA2 results # 5 of 9
68 187 3 30 2.57E-04

For Julian Day 187, selecting COMIDA2 results # 5 of 9
69 187 4 29 1.14E-04

For Julian Day 187, selecting COMIDA2 results # 5 of 9
70 189 2 14 2.25E-03

For Julian Day 189, selecting COMIDA2 results # 5 of 9
71 190 12 6 1.22E-02

For Julian Day 190, selecting COMIDA2 results # 5 of 9
72 190 22 16 3.17E-03

For Julian Day 190, selecting COMIDA2 results # 5 of 9
73 194 5 36 2.19E-04

For Julian Day 194, selecting COMIDA2 results # 6 of 9
74 194 8 32 3.61E-04

For Julian Day 194, selecting COMIDA2 results # 6 of 9
75 194 14 27 2.76E-04

For Julian Day 194, selecting COMIDA2 results # 6 of 9
76 194 18 32 3.61E-04

For Julian Day 194, selecting COMIDA2 results # 6 of 9
77 196 3 10 4.33E-03

For Julian Day 196, selecting COMIDA2 results # 6 of 9
78 196 15 35 2.47E-04

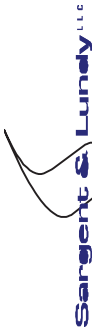
For Julian Day 196, selecting COMIDA2 results # 6 of 9
79 198 20 11 6.66E-03

For Julian Day 198, selecting COMIDA2 results # 6 of 9
80 200 8 32 3.61E-04

For Julian Day 200, selecting COMIDA2 results # 6 of 9
81 202 24 9 8.75E-04

For Julian Day 202, selecting COMIDA2 results # 6 of 9
82 204 5 13 4.57E-04

For Julian Day 204, selecting COMIDA2 results # 6 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-81 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

83	204	16	7	7.65E-03		
For Julian Day 204,	selecting	COMIDA2	results #	6 of 9		
84	206	18	6	1.22E-02		
For Julian Day 206,	selecting	COMIDA2	results #	6 of 9		
85	209	2	5	6.36E-03		
For Julian Day 209,	selecting	COMIDA2	results #	6 of 9		
86	209	10	36	2.19E-04		
For Julian Day 209,	selecting	COMIDA2	results #	6 of 9		
87	209	13	32	3.61E-04		
For Julian Day 209,	selecting	COMIDA2	results #	6 of 9		
88	209	24	20	3.17E-03		
For Julian Day 209,	selecting	COMIDA2	results #	6 of 9		
89	210	2	19	9.51E-04		
For Julian Day 210,	selecting	COMIDA2	results #	6 of 9		
90	210	7	3	3.14E-04		
For Julian Day 210,	selecting	COMIDA2	results #	6 of 9		
91	210	10	4	3.11E-03		
For Julian Day 210,	selecting	COMIDA2	results #	6 of 9		
92	210	12	4	3.11E-03		
For Julian Day 210,	selecting	COMIDA2	results #	6 of 9		
93	211	3	10	4.33E-03		
For Julian Day 211,	selecting	COMIDA2	results #	6 of 9		
94	215	2	9	8.75E-04		
For Julian Day 215,	selecting	COMIDA2	results #	6 of 9		
95	215	7	3	3.14E-04		
For Julian Day 215,	selecting	COMIDA2	results #	6 of 9		
96	216	4	3	3.14E-04		
For Julian Day 216,	selecting	COMIDA2	results #	6 of 9		
97	216	6	9	8.75E-04		
For Julian Day 216,	selecting	COMIDA2	results #	6 of 9		
98	217	3	11	6.66E-03		
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9		
99	217	12	31	2.85E-04		
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9		
100	217	16	30	2.57E-04		



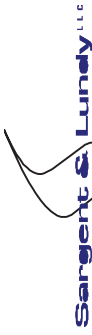
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-82 of 1.2-263

Client PSEG Nuclear Development	<input checked="" type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> Non-Safety Related
Project PSEG ESPA	Prepared by	
Proj. No 12380-001	Reviewed by	
Equip. No.	Approved by	
	Date	Date
	Date	Date
	Date	Date

For Julian Day 217, selecting COMIDA2 results # 6 of 9

TRIAL	DAY	HOUR	BIN	PRBMET
101	217	18	30	2.57E-04
For Julian Day 217, selecting COMIDA2 results # 6 of 9				
102	217	19	29	1.14E-04
For Julian Day 217, selecting COMIDA2 results # 6 of 9				
103	217	20	27	2.76E-04
For Julian Day 217, selecting COMIDA2 results # 6 of 9				
104	218	6	19	9.51E-04
For Julian Day 218, selecting COMIDA2 results # 6 of 9				
105	218	23	12	1.27E-02
For Julian Day 218, selecting COMIDA2 results # 6 of 9				
106	223	22	7	7.65E-03
For Julian Day 223, selecting COMIDA2 results # 7 of 9				
107	224	18	17	3.45E-03
For Julian Day 224, selecting COMIDA2 results # 7 of 9				
108	226	9	26	2.95E-04
For Julian Day 226, selecting COMIDA2 results # 7 of 9				
109	226	12	24	1.14E-04
For Julian Day 226, selecting COMIDA2 results # 7 of 9				
110	226	14	6	1.22E-02
For Julian Day 226, selecting COMIDA2 results # 7 of 9				
111	226	19	4	3.11E-03
For Julian Day 226, selecting COMIDA2 results # 7 of 9				
112	227	16	18	4.00E-04
For Julian Day 227, selecting COMIDA2 results # 7 of 9				
113	228	3	3	3.14E-04
For Julian Day 228, selecting COMIDA2 results # 7 of 9				
114	228	5	10	4.33E-03
For Julian Day 228, selecting COMIDA2 results # 7 of 9				
115	228	20	21	2.40E-03
For Julian Day 228, selecting COMIDA2 results # 7 of 9				
116	229	6	17	3.45E-03



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-83	of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 229, selecting COMIDA2 results # 7 of 9
 117 230 9 26 2.95E-04

For Julian Day 230, selecting COMIDA2 results # 7 of 9
 118 230 12 26 2.95E-04

For Julian Day 230, selecting COMIDA2 results # 7 of 9
 119 230 15 25 3.04E-04

For Julian Day 230, selecting COMIDA2 results # 7 of 9
 120 230 16 25 3.04E-04

For Julian Day 230, selecting COMIDA2 results # 7 of 9
 121 230 17 24 1.14E-04

For Julian Day 230, selecting COMIDA2 results # 7 of 9
 122 230 18 22 7.23E-04

For Julian Day 230, selecting COMIDA2 results # 7 of 9
 123 230 23 20 3.17E-03

For Julian Day 230, selecting COMIDA2 results # 7 of 9
 124 231 13 36 2.19E-04

For Julian Day 231, selecting COMIDA2 results # 7 of 9
 125 231 14 36 2.19E-04

For Julian Day 231, selecting COMIDA2 results # 7 of 9
 126 231 16 35 2.47E-04

For Julian Day 231, selecting COMIDA2 results # 7 of 9
 127 231 18 34 1.14E-04

For Julian Day 231, selecting COMIDA2 results # 7 of 9
 128 234 14 30 2.57E-04

For Julian Day 234, selecting COMIDA2 results # 7 of 9
 129 235 16 5 6.36E-03

For Julian Day 235, selecting COMIDA2 results # 7 of 9
 130 236 13 1 2.47E-04

For Julian Day 236, selecting COMIDA2 results # 7 of 9
 131 238 7 11 6.66E-03

For Julian Day 238, selecting COMIDA2 results # 7 of 9
 132 243 12 27 2.76E-04

For Julian Day 243, selecting COMIDA2 results # 7 of 9
 133 243 15 24 1.14E-04

For Julian Day 243, selecting COMIDA2 results # 7 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-84 of 1.2-263

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA				
Proj. No	12380-001	Equip. No.			
		Prepared by		Date	
		Reviewed by		Date	
		Approved by		Date	

134	243	17	26	2.95E-04
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9	
135	243	21	25	3.04E-04
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9	
136	243	23	24	1.14E-04
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9	
137	245	7	15	2.97E-03
For Julian Day 245,	selecting	COMIDA2	results # 7 of 9	
138	248	3	14	2.25E-03
For Julian Day 248,	selecting	COMIDA2	results # 7 of 9	
139	250	15	6	1.22E-02
For Julian Day 250,	selecting	COMIDA2	results # 7 of 9	
140	251	10	1	2.47E-04
For Julian Day 251,	selecting	COMIDA2	results # 7 of 9	
141	253	2	8	2.64E-03
For Julian Day 253,	selecting	COMIDA2	results # 7 of 9	
142	253	4	25	3.04E-04
For Julian Day 253,	selecting	COMIDA2	results # 7 of 9	
143	254	4	12	1.27E-02
For Julian Day 254,	selecting	COMIDA2	results # 7 of 9	
144	254	24	14	2.25E-03
For Julian Day 254,	selecting	COMIDA2	results # 7 of 9	
145	255	13	5	6.36E-03
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9	
146	255	14	4	3.11E-03
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9	
147	260	5	3	3.14E-04
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9	
148	260	10	1	2.47E-04
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9	
149	263	14	2	3.82E-03
For Julian Day 263,	selecting	COMIDA2	results # 8 of 9	
150	264	13	5	6.36E-03
For Julian Day 264,	selecting	COMIDA2	results # 8 of 9	



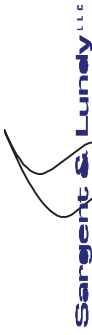
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-85 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

TRIAL	DAY	HOUR	BIN	PRBMET
151	266	7	16	3.17E-03
For Julian Day 266, selecting COMIDA2 results # 8 of 9				
152	269	8	9	8.75E-04
For Julian Day 269, selecting COMIDA2 results # 8 of 9				
153	269	13	1	2.47E-04
For Julian Day 269, selecting COMIDA2 results # 8 of 9				
154	270	21	9	8.75E-04
For Julian Day 270, selecting COMIDA2 results # 8 of 9				
155	271	8	13	4.57E-04
For Julian Day 271, selecting COMIDA2 results # 8 of 9				
156	271	17	21	2.40E-03
For Julian Day 271, selecting COMIDA2 results # 8 of 9				
157	271	20	20	3.17E-03
For Julian Day 271, selecting COMIDA2 results # 8 of 9				
158	271	24	18	4.00E-04
For Julian Day 271, selecting COMIDA2 results # 8 of 9				
159	272	2	31	2.85E-04
For Julian Day 272, selecting COMIDA2 results # 8 of 9				
160	272	3	30	2.57E-04
For Julian Day 272, selecting COMIDA2 results # 8 of 9				
161	272	6	29	1.14E-04
For Julian Day 272, selecting COMIDA2 results # 8 of 9				
162	272	9	36	2.19E-04
For Julian Day 272, selecting COMIDA2 results # 8 of 9				
163	272	11	35	2.47E-04
For Julian Day 272, selecting COMIDA2 results # 8 of 9				
164	272	13	34	1.14E-04
For Julian Day 272, selecting COMIDA2 results # 8 of 9				
165	272	15	32	3.61E-04
For Julian Day 272, selecting COMIDA2 results # 8 of 9				
166	272	21	32	3.61E-04
For Julian Day 272, selecting COMIDA2 results # 8 of 9				
167	274	20	11	6.66E-03



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-86 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 274, selecting COMIDA2 results # 8 of 9
 168 274 21 15 2.97E-03

For Julian Day 274, selecting COMIDA2 results # 8 of 9
 169 275 10 4 3.11E-03

For Julian Day 275, selecting COMIDA2 results # 8 of 9
 170 276 3 21 2.40E-03

For Julian Day 276, selecting COMIDA2 results # 8 of 9
 171 276 18 10 4.33E-03

For Julian Day 276, selecting COMIDA2 results # 8 of 9
 172 277 17 3 3.14E-04

For Julian Day 277, selecting COMIDA2 results # 8 of 9
 173 278 12 1 2.47E-04

For Julian Day 278, selecting COMIDA2 results # 8 of 9
 174 280 9 4 3.11E-03

For Julian Day 280, selecting COMIDA2 results # 8 of 9
 175 281 21 10 4.33E-03

For Julian Day 281, selecting COMIDA2 results # 8 of 9
 176 281 24 13 4.57E-04

For Julian Day 281, selecting COMIDA2 results # 8 of 9
 177 282 6 13 4.57E-04

For Julian Day 282, selecting COMIDA2 results # 8 of 9
 178 282 7 13 4.57E-04

For Julian Day 282, selecting COMIDA2 results # 8 of 9
 179 282 8 9 8.75E-04

For Julian Day 282, selecting COMIDA2 results # 8 of 9
 180 285 8 7 7.65E-03

For Julian Day 285, selecting COMIDA2 results # 8 of 9
 181 285 14 2 3.82E-03

For Julian Day 285, selecting COMIDA2 results # 8 of 9
 182 289 23 12 1.27E-02

For Julian Day 289, selecting COMIDA2 results # 9 of 9
 183 292 21 19 9.51E-04

For Julian Day 292, selecting COMIDA2 results # 9 of 9
 184 292 24 27 2.76E-04

For Julian Day 292, selecting COMIDA2 results # 9 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-87 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

185	293	1	32	3.61E-04
For Julian Day 293,	selecting	COMIDA2	results #	9 of 9
186	293	3	17	3.45E-03
For Julian Day 293,	selecting	COMIDA2	results #	9 of 9
187	297	22	15	2.97E-03
For Julian Day 297,	selecting	COMIDA2	results #	9 of 9
188	299	7	10	4.33E-03
For Julian Day 299,	selecting	COMIDA2	results #	9 of 9
189	299	18	3	3.14E-04
For Julian Day 299,	selecting	COMIDA2	results #	9 of 9
190	300	3	11	6.66E-03
For Julian Day 300,	selecting	COMIDA2	results #	9 of 9
191	300	16	6	1.22E-02
For Julian Day 300,	selecting	COMIDA2	results #	9 of 9
192	301	20	14	2.25E-03
For Julian Day 301,	selecting	COMIDA2	results #	9 of 9
193	302	14	5	6.36E-03
For Julian Day 302,	selecting	COMIDA2	results #	9 of 9
194	304	6	24	1.14E-04
For Julian Day 304,	selecting	COMIDA2	results #	9 of 9
195	309	9	18	4.00E-04
For Julian Day 309,	selecting	COMIDA2	results #	9 of 9
196	309	16	22	7.23E-04
For Julian Day 309,	selecting	COMIDA2	results #	9 of 9
197	313	1	16	3.17E-03
For Julian Day 313,	selecting	COMIDA2	results #	9 of 9
198	314	2	12	1.27E-02
For Julian Day 314,	selecting	COMIDA2	results #	9 of 9
199	315	2	31	2.85E-04
For Julian Day 315,	selecting	COMIDA2	results #	9 of 9
200	315	5	31	2.85E-04
For Julian Day 315,	selecting	COMIDA2	results #	9 of 9



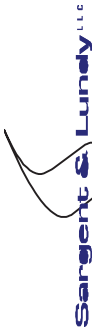
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-88 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

201	315	7	30	2.57E-04
For Julian Day 315,	selecting	COMIDA2	results #	9 of 9
202	315	9	30	2.57E-04
For Julian Day 315,	selecting	COMIDA2	results #	9 of 9
203	315	10	29	1.14E-04
For Julian Day 315,	selecting	COMIDA2	results #	9 of 9
204	315	11	28	1.14E-04
For Julian Day 315,	selecting	COMIDA2	results #	9 of 9
205	315	12	27	2.76E-04
For Julian Day 315,	selecting	COMIDA2	results #	9 of 9
206	317	20	22	7.23E-04
For Julian Day 317,	selecting	COMIDA2	results #	9 of 9
207	318	6	7	7.65E-03
For Julian Day 318,	selecting	COMIDA2	results #	9 of 9
208	321	22	14	2.25E-03
For Julian Day 321,	selecting	COMIDA2	results #	9 of 9
209	323	11	11	6.66E-03
For Julian Day 323,	selecting	COMIDA2	results #	9 of 9
210	324	4	13	4.57E-04
For Julian Day 324,	selecting	COMIDA2	results #	9 of 9
211	324	18	9	8.75E-04
For Julian Day 324,	selecting	COMIDA2	results #	9 of 9
212	324	21	13	4.57E-04
For Julian Day 324,	selecting	COMIDA2	results #	9 of 9
213	325	18	24	1.14E-04
For Julian Day 325,	selecting	COMIDA2	results #	9 of 9
214	325	19	23	1.14E-04
For Julian Day 325,	selecting	COMIDA2	results #	9 of 9
215	326	8	5	6.36E-03
For Julian Day 326,	selecting	COMIDA2	results #	9 of 9
216	326	17	21	2.40E-03
For Julian Day 326,	selecting	COMIDA2	results #	9 of 9
217	326	21	20	3.17E-03
For Julian Day 326,	selecting	COMIDA2	results #	9 of 9
218	327	3	19	9.51E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related	
----------------	---	--------------------	--

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-89	of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 327, selecting COMIDA2 results # 9 of 9
 219 327 18 17 3.45E-03

For Julian Day 327, selecting COMIDA2 results # 9 of 9
 220 328 13 4 3.11E-03

For Julian Day 328, selecting COMIDA2 results # 9 of 9
 221 328 24 21 2.40E-03

For Julian Day 328, selecting COMIDA2 results # 9 of 9
 222 330 20 8 2.64E-03

For Julian Day 330, selecting COMIDA2 results # 9 of 9
 223 331 17 6 1.22E-02

For Julian Day 331, selecting COMIDA2 results # 9 of 9
 224 333 5 32 3.61E-04

For Julian Day 333, selecting COMIDA2 results # 9 of 9
 225 333 6 27 2.76E-04

For Julian Day 333, selecting COMIDA2 results # 9 of 9
 226 333 8 17 3.45E-03

For Julian Day 333, selecting COMIDA2 results # 9 of 9
 227 335 4 9 8.75E-04

For Julian Day 335, selecting COMIDA2 results # 1 of 9
 228 335 7 15 2.97E-03

For Julian Day 335, selecting COMIDA2 results # 1 of 9
 229 336 1 20 3.17E-03

For Julian Day 336, selecting COMIDA2 results # 1 of 9
 230 336 15 8 2.64E-03

For Julian Day 336, selecting COMIDA2 results # 1 of 9
 231 338 1 14 2.25E-03

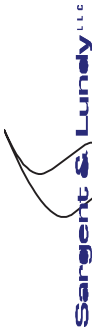
For Julian Day 338, selecting COMIDA2 results # 1 of 9
 232 338 8 12 1.27E-02

For Julian Day 338, selecting COMIDA2 results # 1 of 9
 233 342 8 22 7.23E-04

For Julian Day 342, selecting COMIDA2 results # 1 of 9
 234 342 11 18 4.00E-04

For Julian Day 342, selecting COMIDA2 results # 1 of 9
 235 343 18 16 3.17E-03

For Julian Day 343, selecting COMIDA2 results # 1 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-90 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

236	344	4	26	2.95E-04
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9	
237	344	8	26	2.95E-04
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9	
238	344	10	25	3.04E-04
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9	
239	344	13	25	3.04E-04
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9	
240	344	14	24	1.14E-04
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9	
241	344	15	23	1.14E-04
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9	
242	345	8	19	9.51E-04
For Julian Day 345,	selecting	COMIDA2	results # 1 of 9	
243	345	21	14	2.25E-03
For Julian Day 345,	selecting	COMIDA2	results # 1 of 9	
244	346	10	18	4.00E-04
For Julian Day 346,	selecting	COMIDA2	results # 1 of 9	
245	349	14	2	3.82E-03
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9	
246	349	17	7	7.65E-03
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9	
247	350	24	11	6.66E-03
For Julian Day 350,	selecting	COMIDA2	results # 1 of 9	
248	352	22	10	4.33E-03
For Julian Day 352,	selecting	COMIDA2	results # 1 of 9	
249	353	17	10	4.33E-03
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9	
250	353	24	21	2.40E-03
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9	

TRIAL	DAY	HOUR	BIN	PRBMET
251	356	21	15	2.97E-03
For Julian Day 356,	selecting	COMIDA2	results # 1 of 9	

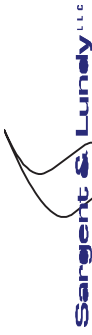


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-91 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

252	358	6	16	3.17E-03		
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9			
253	358	22	12	1.27E-02		
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9			
254	363	22	7	7.65E-03		
For Julian Day 363,	selecting	COMIDA2	results # 1 of 9			
255	365	4	13	4.57E-04		
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9			
256	365	9	13	4.57E-04		
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9			
257	2	7	19	9.51E-04		
For Julian Day 2,	selecting	COMIDA2	results # 1 of 9			
258	3	11	14	2.25E-03		
For Julian Day 3,	selecting	COMIDA2	results # 1 of 9			
259	5	19	11	6.66E-03		
For Julian Day 5,	selecting	COMIDA2	results # 1 of 9			
260	6	9	6	1.22E-02		
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9			
261	6	17	8	2.64E-03		
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9			
262	10	13	2	3.82E-03		
For Julian Day 10,	selecting	COMIDA2	results # 1 of 9			
263	13	10	20	3.17E-03		
For Julian Day 13,	selecting	COMIDA2	results # 1 of 9			
264	16	2	8	2.64E-03		
For Julian Day 16,	selecting	COMIDA2	results # 1 of 9			
265	16	20	7	7.65E-03		
For Julian Day 16,	selecting	COMIDA2	results # 1 of 9			
266	18	10	17	3.45E-03		
For Julian Day 18,	selecting	COMIDA2	results # 1 of 9			
267	19	10	8	2.64E-03		
For Julian Day 19,	selecting	COMIDA2	results # 1 of 9			
268	20	9	6	1.22E-02		
For Julian Day 20,	selecting	COMIDA2	results # 1 of 9			
269	23	1	8	2.64E-03		



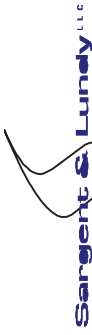
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-92	of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 23,	24	selecting	COMIDA2	results # 1 of 9	270	4	3	3.14E-04
For Julian Day 24,	24	selecting	COMIDA2	results # 1 of 9	271	15	7	7.65E-03
For Julian Day 24,	24	selecting	COMIDA2	results # 1 of 9	272	14	20	3.17E-03
For Julian Day 25,	25	selecting	COMIDA2	results # 1 of 9	273	20	19	9.51E-04
For Julian Day 25,	25	selecting	COMIDA2	results # 1 of 9	274	21	18	4.00E-04
For Julian Day 25,	25	selecting	COMIDA2	results # 1 of 9	275	2	17	3.45E-03
For Julian Day 26,	26	selecting	COMIDA2	results # 1 of 9	276	17	9	8.75E-04
For Julian Day 33,	33	selecting	COMIDA2	results # 2 of 9	277	19	15	2.97E-03
For Julian Day 33,	33	selecting	COMIDA2	results # 2 of 9	278	23	18	4.00E-04
For Julian Day 36,	36	selecting	COMIDA2	results # 2 of 9	279	17	22	7.23E-04
For Julian Day 37,	37	selecting	COMIDA2	results # 2 of 9	280	17	6	1.22E-02
For Julian Day 39,	39	selecting	COMIDA2	results # 2 of 9	281	22	16	3.17E-03
For Julian Day 40,	40	selecting	COMIDA2	results # 2 of 9	282	5	12	1.27E-02
For Julian Day 42,	42	selecting	COMIDA2	results # 2 of 9	283	23	13	4.57E-04
For Julian Day 42,	42	selecting	COMIDA2	results # 2 of 9	284	8	9	8.75E-04
For Julian Day 43,	43	selecting	COMIDA2	results # 2 of 9	285	6	11	6.66E-03
For Julian Day 44,	44	selecting	COMIDA2	results # 2 of 9	286	22	15	2.97E-03
For Julian Day 44,	44	selecting	COMIDA2	results # 2 of 9				



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-93 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

287	For Julian Day 46,	46	20	12	1.27E-02
288	46, selecting COMIDA2 results # 2 of 9	47	11	2	3.82E-03
289	47, selecting COMIDA2 results # 2 of 9	47	17	5	6.36E-03
290	47, selecting COMIDA2 results # 2 of 9	48	1	14	2.25E-03
291	48, selecting COMIDA2 results # 2 of 9	48	14	4	3.11E-03
292	48, selecting COMIDA2 results # 2 of 9	53	13	2	3.82E-03
293	53, selecting COMIDA2 results # 2 of 9	53	17	7	7.65E-03
294	53, selecting COMIDA2 results # 2 of 9	55	5	21	2.40E-03
295	55, selecting COMIDA2 results # 2 of 9	62	9	16	3.17E-03
296	62, selecting COMIDA2 results # 2 of 9	62	23	16	3.17E-03
297	62, selecting COMIDA2 results # 2 of 9	63	19	14	2.25E-03
298	63, selecting COMIDA2 results # 2 of 9	64	1	15	2.97E-03
299	64, selecting COMIDA2 results # 2 of 9	64	15	5	6.36E-03
300	64, selecting COMIDA2 results # 2 of 9	66	6	27	2.76E-04
	66, selecting COMIDA2 results # 2 of 9				

TRIAL	DAY	HOUR	BIN	PRBMET
301	66	7	32	3.61E-04
302	66	8	22	7.23E-04
	66,	selecting COMIDA2 results # 2 of 9		
	66,	selecting COMIDA2 results # 2 of 9		



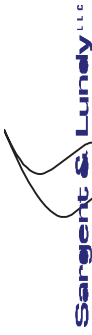
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-94 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

303	For Julian Day 66,	12	35	2.47E-04
304	66, selecting	COMIDA2	results #	2 of 9
305	68,	19	10	4.33E-03
306	68, selecting	COMIDA2	results #	2 of 9
307	69,	15	1	2.47E-04
308	69, selecting	COMIDA2	results #	2 of 9
309	72,	11	2	3.82E-03
310	72, selecting	COMIDA2	results #	2 of 9
311	74,	8	10	4.33E-03
312	74, selecting	COMIDA2	results #	2 of 9
313	75,	24	21	2.40E-03
314	75, selecting	COMIDA2	results #	2 of 9
315	76,	6	19	9.51E-04
316	76, selecting	COMIDA2	results #	2 of 9
317	78,	6	3	3.14E-04
318	78, selecting	COMIDA2	results #	2 of 9
319	79,	2	22	7.23E-04
320	79, selecting	COMIDA2	results #	2 of 9
	79,	6	17	3.45E-03
	79, selecting	COMIDA2	results #	2 of 9
	80,	2	11	6.66E-03
	80, selecting	COMIDA2	results #	2 of 9
	80,	5	13	4.57E-04
	80, selecting	COMIDA2	results #	2 of 9
	81,	19	8	2.64E-03
	81, selecting	COMIDA2	results #	2 of 9
	84,	24	18	4.00E-04
	84, selecting	COMIDA2	results #	2 of 9
	85,	3	17	3.45E-03
	85, selecting	COMIDA2	results #	2 of 9
	86,	13	12	1.27E-02
	86, selecting	COMIDA2	results #	2 of 9
	87,	7	20	3.17E-03
	87, selecting	COMIDA2	results #	2 of 9
	89,	13	1	2.47E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-95	of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 89,	selecting	COMIDA2	results	# 2	of 9
321	90	19	19	9.51E-04	
For Julian Day 90,	selecting	COMIDA2	results	# 2	of 9
322	91	2	20	3.17E-03	
For Julian Day 91,	selecting	COMIDA2	results	# 2	of 9
323	94	1	19	9.51E-04	
For Julian Day 94,	selecting	COMIDA2	results	# 3	of 9
324	95	20	8	2.64E-03	
For Julian Day 95,	selecting	COMIDA2	results	# 3	of 9
325	96	21	12	1.27E-02	
For Julian Day 96,	selecting	COMIDA2	results	# 3	of 9
326	97	11	2	3.82E-03	
For Julian Day 97,	selecting	COMIDA2	results	# 3	of 9
327	97	24	15	2.97E-03	
For Julian Day 97,	selecting	COMIDA2	results	# 3	of 9
328	98	5	14	2.25E-03	
For Julian Day 98,	selecting	COMIDA2	results	# 3	of 9
329	98	8	15	2.97E-03	
For Julian Day 98,	selecting	COMIDA2	results	# 3	of 9
330	98	13	2	3.82E-03	
For Julian Day 98,	selecting	COMIDA2	results	# 3	of 9
331	99	8	21	2.40E-03	
For Julian Day 99,	selecting	COMIDA2	results	# 3	of 9
332	99	23	18	4.00E-04	
For Julian Day 99,	selecting	COMIDA2	results	# 3	of 9
333	100	19	6	1.22E-02	
For Julian Day 100,	selecting	COMIDA2	results	# 3	of 9
334	100	22	16	3.17E-03	
For Julian Day 100,	selecting	COMIDA2	results	# 3	of 9
335	102	8	20	3.17E-03	
For Julian Day 102,	selecting	COMIDA2	results	# 3	of 9
336	102	12	7	7.65E-03	
For Julian Day 102,	selecting	COMIDA2	results	# 3	of 9
337	104	14	35	2.47E-04	
For Julian Day 104,	selecting	COMIDA2	results	# 3	of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page 1.2-96 of 1.2-263

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

338	104	17	22	7.23E-04
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9	
339	104	19	32	3.61E-04
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9	
340	105	2	21	2.40E-03
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9	
341	105	12	17	3.45E-03
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9	
342	105	14	26	2.95E-04
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9	
343	107	11	1	2.47E-04
For Julian Day 107,	selecting	COMIDA2	results # 3 of 9	
344	107	13	1	2.47E-04
For Julian Day 107,	selecting	COMIDA2	results # 3 of 9	
345	109	18	16	3.17E-03
For Julian Day 109,	selecting	COMIDA2	results # 3 of 9	
346	110	3	13	4.57E-04
For Julian Day 110,	selecting	COMIDA2	results # 3 of 9	
347	110	7	14	2.25E-03
For Julian Day 110,	selecting	COMIDA2	results # 3 of 9	
348	112	7	5	6.36E-03
For Julian Day 112,	selecting	COMIDA2	results # 3 of 9	
349	114	2	9	8.75E-04
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9	
350	114	14	31	2.85E-04
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9	

TRIAL	DAY	HOUR	BIN	PRBMET
351	114	15	31	2.85E-04
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9	
352	114	18	30	2.57E-04
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9	
353	114	19	29	1.14E-04
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9	



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-97 of 1.2-263

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related	
354	114	20	27	2.76E-04
For Julian Day 114,	selecting	COMIDA2	results # 3	of 9
355	114	24	4	3.11E-03
For Julian Day 114,	selecting	COMIDA2	results # 3	of 9
356	116	22	8	2.64E-03
For Julian Day 116,	selecting	COMIDA2	results # 3	of 9
357	117	1	25	3.04E-04
For Julian Day 117,	selecting	COMIDA2	results # 3	of 9
358	117	17	22	7.23E-04
For Julian Day 117,	selecting	COMIDA2	results # 3	of 9
359	123	18	16	3.17E-03
For Julian Day 123,	selecting	COMIDA2	results # 3	of 9
360	124	6	17	3.45E-03
For Julian Day 124,	selecting	COMIDA2	results # 3	of 9
361	124	10	20	3.17E-03
For Julian Day 124,	selecting	COMIDA2	results # 3	of 9
362	125	15	2	3.82E-03
For Julian Day 125,	selecting	COMIDA2	results # 3	of 9
363	125	17	6	1.22E-02
For Julian Day 125,	selecting	COMIDA2	results # 3	of 9
364	127	11	1	2.47E-04
For Julian Day 127,	selecting	COMIDA2	results # 3	of 9
365	128	11	21	2.40E-03
For Julian Day 128,	selecting	COMIDA2	results # 3	of 9
366	128	14	18	4.00E-04
For Julian Day 128,	selecting	COMIDA2	results # 3	of 9
367	130	17	36	2.19E-04
For Julian Day 130,	selecting	COMIDA2	results # 3	of 9
368	130	19	35	2.47E-04
For Julian Day 130,	selecting	COMIDA2	results # 3	of 9
369	130	22	35	2.47E-04
For Julian Day 130,	selecting	COMIDA2	results # 3	of 9
370	130	23	34	1.14E-04
For Julian Day 130,	selecting	COMIDA2	results # 3	of 9
371	131	1	34	1.14E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-98	of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 131, selecting COMIDA2 results # 3 of 9
 372 132 5 10 4.33E-03

For Julian Day 132, selecting COMIDA2 results # 3 of 9
 373 132 23 31 2.85E-04

For Julian Day 132, selecting COMIDA2 results # 3 of 9
 374 133 2 31 2.85E-04

For Julian Day 133, selecting COMIDA2 results # 3 of 9
 375 133 4 30 2.57E-04

For Julian Day 133, selecting COMIDA2 results # 3 of 9
 376 133 8 30 2.57E-04

For Julian Day 133, selecting COMIDA2 results # 3 of 9
 377 133 9 29 1.14E-04

For Julian Day 133, selecting COMIDA2 results # 3 of 9
 378 133 10 28 1.14E-04

For Julian Day 133, selecting COMIDA2 results # 3 of 9
 379 137 9 3 3.14E-04

For Julian Day 137, selecting COMIDA2 results # 4 of 9
 380 137 21 11 6.66E-03

For Julian Day 137, selecting COMIDA2 results # 4 of 9
 381 141 15 2 3.82E-03

For Julian Day 141, selecting COMIDA2 results # 4 of 9
 382 142 18 4 3.11E-03

For Julian Day 142, selecting COMIDA2 results # 4 of 9
 383 142 21 12 1.27E-02

For Julian Day 142, selecting COMIDA2 results # 4 of 9
 384 143 19 15 2.97E-03

For Julian Day 143, selecting COMIDA2 results # 4 of 9
 385 144 22 16 3.17E-03

For Julian Day 144, selecting COMIDA2 results # 4 of 9
 386 146 15 7 7.65E-03

For Julian Day 146, selecting COMIDA2 results # 4 of 9
 387 146 21 27 2.76E-04

For Julian Day 146, selecting COMIDA2 results # 4 of 9
 388 147 5 19 9.51E-04

For Julian Day 147, selecting COMIDA2 results # 4 of 9



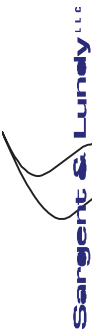
Calcs. For **ENVIRONMENTAL CONSEQUENCE**
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-99 of 1.2-263

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

389 148 13 1 2.47E-04
 For Julian Day 148, selecting COMIDA2 results # 4 of 9
 390 149 10 5 6.36E-03
 For Julian Day 149, selecting COMIDA2 results # 4 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-100 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001 Equip. No.	Approved by
	Date
	Date
	Date

WARNING!! WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 154, selecting COMIDA2 results # 4 of 9
 For Julian Day 155, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 158, selecting COMIDA2 results # 4 of 9
 For Julian Day 159, selecting COMIDA2 results # 4 of 9
 For Julian Day 159, selecting COMIDA2 results # 4 of 9
 For Julian Day 160, selecting COMIDA2 results # 4 of 9
 For Julian Day 160, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-102 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-103 of 1.2-263

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 216,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 217,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 217,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 217,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 217,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 217,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 217,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 218,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 218,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 223,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 224,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 226,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 226,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 226,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 226,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 227,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 228,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 228,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 228,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 229,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 231,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 231,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 231,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 231,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 234,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 235,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 236,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 238,	selecting	COMIDA2	results	#	7	of	9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-105 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 274,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 274,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 275,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 276,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 276,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 277,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 278,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 280,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 281,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 281,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 289,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 297,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 301,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 302,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 304,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 313,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-106 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9
For Julian Day 330,	selecting COMIDA2 results	# 9 of 9
For Julian Day 331,	selecting COMIDA2 results	# 9 of 9
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9
For Julian Day 343,	selecting COMIDA2 results	# 1 of 9
For Julian Day 344,	selecting COMIDA2 results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-107 of 1.2-263

Client PSEG Nuclear Development	<input checked="" type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

For Julian Day 344,	selecting	COMIDA2	results # 1 of 9
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9
For Julian Day 345,	selecting	COMIDA2	results # 1 of 9
For Julian Day 345,	selecting	COMIDA2	results # 1 of 9
For Julian Day 346,	selecting	COMIDA2	results # 1 of 9
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9
For Julian Day 350,	selecting	COMIDA2	results # 1 of 9
For Julian Day 352,	selecting	COMIDA2	results # 1 of 9
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9
For Julian Day 356,	selecting	COMIDA2	results # 1 of 9
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9
For Julian Day 363,	selecting	COMIDA2	results # 1 of 9
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9
For Julian Day 2,	selecting	COMIDA2	results # 1 of 9
For Julian Day 3,	selecting	COMIDA2	results # 1 of 9
For Julian Day 5,	selecting	COMIDA2	results # 1 of 9
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9
For Julian Day 10,	selecting	COMIDA2	results # 1 of 9
For Julian Day 13,	selecting	COMIDA2	results # 1 of 9
For Julian Day 16,	selecting	COMIDA2	results # 1 of 9
For Julian Day 16,	selecting	COMIDA2	results # 1 of 9
For Julian Day 18,	selecting	COMIDA2	results # 1 of 9
For Julian Day 19,	selecting	COMIDA2	results # 1 of 9
For Julian Day 20,	selecting	COMIDA2	results # 1 of 9
For Julian Day 23,	selecting	COMIDA2	results # 1 of 9
For Julian Day 24,	selecting	COMIDA2	results # 1 of 9
For Julian Day 24,	selecting	COMIDA2	results # 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-108 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-109 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-110 of 1.2-263

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 109,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-111 of 1.2-263

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	Date	
Project	PSEG ESPA	Date	
Proj. No	12380-001	Date	

For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 137,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting	COMIDA2	results	# 4 of 9



Calcs. For **ENVIRONMENTAL CONSEQUENCE**
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-112 of 1.2-263

Client PSEG Nuclear Development	<input checked="" type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> Non-Safety Related	Prepared by	Date
Project PSEG ESPA			Reviewed by	Date
Proj. No 12380-001	Equip. No.		Approved by	Date

WARNING!! WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

For Julian Day 152, selecting COMIDA2 results # 4 of 9
For Julian Day 152, selecting COMIDA2 results # 4 of 9
For Julian Day 152, selecting COMIDA2 results # 4 of 9
For Julian Day 153, selecting COMIDA2 results # 4 of 9
For Julian Day 153, selecting COMIDA2 results # 4 of 9
For Julian Day 153, selecting COMIDA2 results # 4 of 9
For Julian Day 153, selecting COMIDA2 results # 4 of 9
For Julian Day 153, selecting COMIDA2 results # 4 of 9
For Julian Day 153, selecting COMIDA2 results # 4 of 9
For Julian Day 154, selecting COMIDA2 results # 4 of 9
For Julian Day 155, selecting COMIDA2 results # 4 of 9
For Julian Day 156, selecting COMIDA2 results # 4 of 9
For Julian Day 156, selecting COMIDA2 results # 4 of 9
For Julian Day 157, selecting COMIDA2 results # 4 of 9
For Julian Day 157, selecting COMIDA2 results # 4 of 9
For Julian Day 157, selecting COMIDA2 results # 4 of 9
For Julian Day 157, selecting COMIDA2 results # 4 of 9
For Julian Day 157, selecting COMIDA2 results # 4 of 9
For Julian Day 157, selecting COMIDA2 results # 4 of 9
For Julian Day 157, selecting COMIDA2 results # 4 of 9
For Julian Day 157, selecting COMIDA2 results # 4 of 9
For Julian Day 158, selecting COMIDA2 results # 4 of 9
For Julian Day 159, selecting COMIDA2 results # 4 of 9
For Julian Day 159, selecting COMIDA2 results # 4 of 9
For Julian Day 160, selecting COMIDA2 results # 4 of 9
For Julian Day 160, selecting COMIDA2 results # 4 of 9
For Julian Day 162, selecting COMIDA2 results # 4 of 9
For Julian Day 162, selecting COMIDA2 results # 4 of 9
For Julian Day 162, selecting COMIDA2 results # 4 of 9



Calcs. For **ENVIRONMENTAL CONSEQUENCE**
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-113 of 1.2-263

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	Prepared by	Date
Project	PSEG ESPA				Reviewed by	Date
Proj. No	12380-001	Equip. No.			Approved by	Date

For Julian Day 162,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 162,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 162,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 162,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 163,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 163,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 166,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 166,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 166,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 166,	selecting	COMIDA2	results	#	4	of	9
For Julian Day 167,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 167,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 168,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 169,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 173,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 174,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 174,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 174,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 174,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 177,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 177,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 177,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 177,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 180,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 180,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 180,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 183,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 183,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 183,	selecting	COMIDA2	results	#	5	of	9
For Julian Day 183,	selecting	COMIDA2	results	#	5	of	9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-114 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-117 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 275,	selecting	COMIDA2	results # 8 of 9
For Julian Day 276,	selecting	COMIDA2	results # 8 of 9
For Julian Day 276,	selecting	COMIDA2	results # 8 of 9
For Julian Day 277,	selecting	COMIDA2	results # 8 of 9
For Julian Day 278,	selecting	COMIDA2	results # 8 of 9
For Julian Day 280,	selecting	COMIDA2	results # 8 of 9
For Julian Day 281,	selecting	COMIDA2	results # 8 of 9
For Julian Day 281,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 285,	selecting	COMIDA2	results # 8 of 9
For Julian Day 285,	selecting	COMIDA2	results # 8 of 9
For Julian Day 289,	selecting	COMIDA2	results # 9 of 9
For Julian Day 292,	selecting	COMIDA2	results # 9 of 9
For Julian Day 292,	selecting	COMIDA2	results # 9 of 9
For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 297,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 301,	selecting	COMIDA2	results # 9 of 9
For Julian Day 302,	selecting	COMIDA2	results # 9 of 9
For Julian Day 304,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 313,	selecting	COMIDA2	results # 9 of 9
For Julian Day 314,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-118 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 330,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 331,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 343,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 344,	selecting COMIDA2 results	# 1 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-119 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-120 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-121 of 1.2-263

Client PSEG Nuclear Development	<input checked="" type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

For Julian Day 74,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 75,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 76,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 78,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 81,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 84,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 85,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 86,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 87,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 89,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 90,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 91,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 94,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 95,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 96,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9	

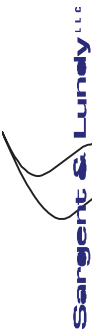


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-123 of 1.2-263

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	Date	
Project	PSEG ESPA	Date	
Proj. No	12380-001	Date	

For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 137,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting	COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

WARNING!! WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 154, selecting COMIDA2 results # 4 of 9
 For Julian Day 155, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 158, selecting COMIDA2 results # 4 of 9
 For Julian Day 159, selecting COMIDA2 results # 4 of 9
 For Julian Day 159, selecting COMIDA2 results # 4 of 9
 For Julian Day 160, selecting COMIDA2 results # 4 of 9
 For Julian Day 160, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-125 of 1.2-263

		<input checked="" type="checkbox"/>	Non-Safety Related

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

		Prepared by		Date	
		Reviewed by		Date	
		Approved by		Date	

For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 168,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-126 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 185,	selecting COMIDA2 results	# 5 of 9
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 189,	selecting COMIDA2 results	# 5 of 9
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 198,	selecting COMIDA2 results	# 6 of 9
For Julian Day 200,	selecting COMIDA2 results	# 6 of 9
For Julian Day 202,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 206,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 211,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.2-127 of 1.2-263

Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

For Julian Day 216, selecting COMIDA2 results # 6 of 9
For Julian Day 217, selecting COMIDA2 results # 6 of 9
For Julian Day 217, selecting COMIDA2 results # 6 of 9
For Julian Day 217, selecting COMIDA2 results # 6 of 9
For Julian Day 217, selecting COMIDA2 results # 6 of 9
For Julian Day 217, selecting COMIDA2 results # 6 of 9
For Julian Day 217, selecting COMIDA2 results # 6 of 9
For Julian Day 217, selecting COMIDA2 results # 6 of 9
For Julian Day 218, selecting COMIDA2 results # 6 of 9
For Julian Day 218, selecting COMIDA2 results # 6 of 9
For Julian Day 223, selecting COMIDA2 results # 7 of 9
For Julian Day 224, selecting COMIDA2 results # 7 of 9
For Julian Day 226, selecting COMIDA2 results # 7 of 9
For Julian Day 226, selecting COMIDA2 results # 7 of 9
For Julian Day 226, selecting COMIDA2 results # 7 of 9
For Julian Day 226, selecting COMIDA2 results # 7 of 9
For Julian Day 227, selecting COMIDA2 results # 7 of 9
For Julian Day 228, selecting COMIDA2 results # 7 of 9
For Julian Day 228, selecting COMIDA2 results # 7 of 9
For Julian Day 228, selecting COMIDA2 results # 7 of 9
For Julian Day 229, selecting COMIDA2 results # 7 of 9
For Julian Day 230, selecting COMIDA2 results # 7 of 9
For Julian Day 230, selecting COMIDA2 results # 7 of 9
For Julian Day 230, selecting COMIDA2 results # 7 of 9
For Julian Day 230, selecting COMIDA2 results # 7 of 9
For Julian Day 230, selecting COMIDA2 results # 7 of 9
For Julian Day 230, selecting COMIDA2 results # 7 of 9
For Julian Day 230, selecting COMIDA2 results # 7 of 9
For Julian Day 230, selecting COMIDA2 results # 7 of 9
For Julian Day 231, selecting COMIDA2 results # 7 of 9
For Julian Day 231, selecting COMIDA2 results # 7 of 9
For Julian Day 231, selecting COMIDA2 results # 7 of 9
For Julian Day 231, selecting COMIDA2 results # 7 of 9
For Julian Day 234, selecting COMIDA2 results # 7 of 9
For Julian Day 235, selecting COMIDA2 results # 7 of 9
For Julian Day 236, selecting COMIDA2 results # 7 of 9
For Julian Day 238, selecting COMIDA2 results # 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-129 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 274,	selecting COMIDA2 results	# 8 of 9
For Julian Day 274,	selecting COMIDA2 results	# 8 of 9
For Julian Day 275,	selecting COMIDA2 results	# 8 of 9
For Julian Day 276,	selecting COMIDA2 results	# 8 of 9
For Julian Day 276,	selecting COMIDA2 results	# 8 of 9
For Julian Day 277,	selecting COMIDA2 results	# 8 of 9
For Julian Day 278,	selecting COMIDA2 results	# 8 of 9
For Julian Day 280,	selecting COMIDA2 results	# 8 of 9
For Julian Day 281,	selecting COMIDA2 results	# 8 of 9
For Julian Day 281,	selecting COMIDA2 results	# 8 of 9
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9
For Julian Day 289,	selecting COMIDA2 results	# 9 of 9
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9
For Julian Day 297,	selecting COMIDA2 results	# 9 of 9
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9
For Julian Day 301,	selecting COMIDA2 results	# 9 of 9
For Julian Day 302,	selecting COMIDA2 results	# 9 of 9
For Julian Day 304,	selecting COMIDA2 results	# 9 of 9
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9
For Julian Day 313,	selecting COMIDA2 results	# 9 of 9
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-130 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9
For Julian Day 330,	selecting COMIDA2 results	# 9 of 9
For Julian Day 331,	selecting COMIDA2 results	# 9 of 9
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9
For Julian Day 343,	selecting COMIDA2 results	# 1 of 9
For Julian Day 344,	selecting COMIDA2 results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev. 2 Date

Page 1.2-131 of 1.2-263

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

Equip. No.	Safety Related	Non-Safety Related
For Julian Day 344,	selecting COMIDA2 results # 1 of 9	
For Julian Day 344,	selecting COMIDA2 results # 1 of 9	
For Julian Day 344,	selecting COMIDA2 results # 1 of 9	
For Julian Day 344,	selecting COMIDA2 results # 1 of 9	
For Julian Day 344,	selecting COMIDA2 results # 1 of 9	
For Julian Day 345,	selecting COMIDA2 results # 1 of 9	
For Julian Day 345,	selecting COMIDA2 results # 1 of 9	
For Julian Day 346,	selecting COMIDA2 results # 1 of 9	
For Julian Day 349,	selecting COMIDA2 results # 1 of 9	
For Julian Day 349,	selecting COMIDA2 results # 1 of 9	
For Julian Day 350,	selecting COMIDA2 results # 1 of 9	
For Julian Day 352,	selecting COMIDA2 results # 1 of 9	
For Julian Day 353,	selecting COMIDA2 results # 1 of 9	
For Julian Day 353,	selecting COMIDA2 results # 1 of 9	
For Julian Day 356,	selecting COMIDA2 results # 1 of 9	
For Julian Day 358,	selecting COMIDA2 results # 1 of 9	
For Julian Day 358,	selecting COMIDA2 results # 1 of 9	
For Julian Day 363,	selecting COMIDA2 results # 1 of 9	
For Julian Day 365,	selecting COMIDA2 results # 1 of 9	
For Julian Day 365,	selecting COMIDA2 results # 1 of 9	
For Julian Day 2,	selecting COMIDA2 results # 1 of 9	
For Julian Day 3,	selecting COMIDA2 results # 1 of 9	
For Julian Day 5,	selecting COMIDA2 results # 1 of 9	
For Julian Day 6,	selecting COMIDA2 results # 1 of 9	
For Julian Day 6,	selecting COMIDA2 results # 1 of 9	
For Julian Day 10,	selecting COMIDA2 results # 1 of 9	
For Julian Day 13,	selecting COMIDA2 results # 1 of 9	
For Julian Day 16,	selecting COMIDA2 results # 1 of 9	
For Julian Day 16,	selecting COMIDA2 results # 1 of 9	
For Julian Day 18,	selecting COMIDA2 results # 1 of 9	
For Julian Day 19,	selecting COMIDA2 results # 1 of 9	
For Julian Day 20,	selecting COMIDA2 results # 1 of 9	
For Julian Day 23,	selecting COMIDA2 results # 1 of 9	
For Julian Day 24,	selecting COMIDA2 results # 1 of 9	
For Julian Day 24,	selecting COMIDA2 results # 1 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-132 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9



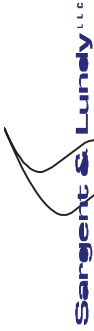
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-133 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 74,	selecting COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Client	PSEG Nuclear Development					
Project	PSEG ESPA					
Proj. No	12380-001	Equip. No.				

	Safety Related	X	Non-Safety Related	Prepared by	Date
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 109,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9		
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9		

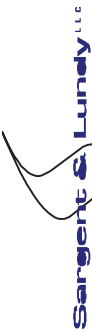


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-135 of 1.2-263

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 133, selecting COMIDA2 results # 3 of 9
 For Julian Day 133, selecting COMIDA2 results # 3 of 9
 For Julian Day 137, selecting COMIDA2 results # 4 of 9
 For Julian Day 137, selecting COMIDA2 results # 4 of 9
 For Julian Day 141, selecting COMIDA2 results # 4 of 9
 For Julian Day 141, selecting COMIDA2 results # 4 of 9
 For Julian Day 142, selecting COMIDA2 results # 4 of 9
 For Julian Day 142, selecting COMIDA2 results # 4 of 9
 For Julian Day 143, selecting COMIDA2 results # 4 of 9
 For Julian Day 143, selecting COMIDA2 results # 4 of 9
 For Julian Day 144, selecting COMIDA2 results # 4 of 9
 For Julian Day 144, selecting COMIDA2 results # 4 of 9
 For Julian Day 146, selecting COMIDA2 results # 4 of 9
 For Julian Day 146, selecting COMIDA2 results # 4 of 9
 For Julian Day 147, selecting COMIDA2 results # 4 of 9
 For Julian Day 147, selecting COMIDA2 results # 4 of 9
 For Julian Day 148, selecting COMIDA2 results # 4 of 9
 For Julian Day 148, selecting COMIDA2 results # 4 of 9
 For Julian Day 149, selecting COMIDA2 results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

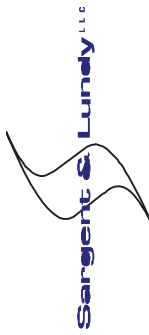
WARNING!! WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 154, selecting COMIDA2 results # 4 of 9
 For Julian Day 155, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 158, selecting COMIDA2 results # 4 of 9
 For Julian Day 159, selecting COMIDA2 results # 4 of 9
 For Julian Day 159, selecting COMIDA2 results # 4 of 9
 For Julian Day 160, selecting COMIDA2 results # 4 of 9
 For Julian Day 160, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Client PSEG Nuclear Development	<input checked="" type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related
Prepared by				
Reviewed by				
Approved by				
Project PSEG ESPA				
Proj. No 12380-001 Equip. No.				
		Date		
		Date		
		Date		

For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting COMIDA2	results	# 4 of 9
For Julian Day 167,	selecting COMIDA2	results	# 5 of 9
For Julian Day 167,	selecting COMIDA2	results	# 5 of 9
For Julian Day 168,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9



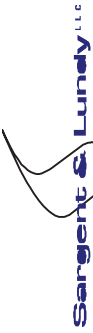
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-138 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 185,	selecting COMIDA2 results	# 5 of 9
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 189,	selecting COMIDA2 results	# 5 of 9
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 198,	selecting COMIDA2 results	# 6 of 9
For Julian Day 200,	selecting COMIDA2 results	# 6 of 9
For Julian Day 202,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 206,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 211,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.2-139 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

For Julian Day 216,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 229,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting	COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-141 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 277,	selecting COMIDA2	results	# 8 of 9
For Julian Day 278,	selecting COMIDA2	results	# 8 of 9
For Julian Day 280,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 289,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 297,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-142 of 1.2-263

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 315, selecting COMIDA2 results # 9 of 9
 For Julian Day 315, selecting COMIDA2 results # 9 of 9
 For Julian Day 315, selecting COMIDA2 results # 9 of 9
 For Julian Day 315, selecting COMIDA2 results # 9 of 9
 For Julian Day 317, selecting COMIDA2 results # 9 of 9
 For Julian Day 318, selecting COMIDA2 results # 9 of 9
 For Julian Day 321, selecting COMIDA2 results # 9 of 9
 For Julian Day 323, selecting COMIDA2 results # 9 of 9
 For Julian Day 324, selecting COMIDA2 results # 9 of 9
 For Julian Day 324, selecting COMIDA2 results # 9 of 9
 For Julian Day 324, selecting COMIDA2 results # 9 of 9
 For Julian Day 325, selecting COMIDA2 results # 9 of 9
 For Julian Day 325, selecting COMIDA2 results # 9 of 9
 For Julian Day 326, selecting COMIDA2 results # 9 of 9
 For Julian Day 326, selecting COMIDA2 results # 9 of 9
 For Julian Day 326, selecting COMIDA2 results # 9 of 9
 For Julian Day 327, selecting COMIDA2 results # 9 of 9
 For Julian Day 327, selecting COMIDA2 results # 9 of 9
 For Julian Day 328, selecting COMIDA2 results # 9 of 9
 For Julian Day 328, selecting COMIDA2 results # 9 of 9
 For Julian Day 330, selecting COMIDA2 results # 9 of 9
 For Julian Day 331, selecting COMIDA2 results # 9 of 9
 For Julian Day 333, selecting COMIDA2 results # 9 of 9
 For Julian Day 333, selecting COMIDA2 results # 9 of 9
 For Julian Day 333, selecting COMIDA2 results # 9 of 9
 For Julian Day 335, selecting COMIDA2 results # 1 of 9
 For Julian Day 335, selecting COMIDA2 results # 1 of 9
 For Julian Day 336, selecting COMIDA2 results # 1 of 9
 For Julian Day 336, selecting COMIDA2 results # 1 of 9
 For Julian Day 338, selecting COMIDA2 results # 1 of 9
 For Julian Day 338, selecting COMIDA2 results # 1 of 9
 For Julian Day 342, selecting COMIDA2 results # 1 of 9
 For Julian Day 342, selecting COMIDA2 results # 1 of 9
 For Julian Day 343, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-143 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-144 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page 1.2-145 of 1.2-263

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Client	PSEG Nuclear Development				Prepared by	Date
Project	PSEG ESPA				Reviewed by	Date
Proj. No	12380-001	Equip. No.			Approved by	Date

Safety Related	Non-Safety Related	Prepared by	Reviewed by	Approved by
For Julian Day 105, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 107, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 107, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 109, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 110, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 110, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 112, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 114, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 114, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 114, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 114, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 114, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 114, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 114, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 114, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 114, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 114, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 116, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 117, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 117, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 123, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 124, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 124, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 125, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 125, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 127, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 128, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 128, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 130, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 130, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 130, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 130, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 131, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 132, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 132, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 133, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 133, selecting COMIDA2 results # 3 of 9	X			
For Julian Day 133, selecting COMIDA2 results # 3 of 9	X			



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-147 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9
For Julian Day 141,	selecting COMIDA2 results	# 4 of 9
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9
For Julian Day 143,	selecting COMIDA2 results	# 4 of 9
For Julian Day 144,	selecting COMIDA2 results	# 4 of 9
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9
For Julian Day 147,	selecting COMIDA2 results	# 4 of 9
For Julian Day 148,	selecting COMIDA2 results	# 4 of 9
For Julian Day 149,	selecting COMIDA2 results	# 4 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-148 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date
	Date
	Date

WARNING!! WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

For Julian Day 151,	selecting COMIDA2	results # 4 of 9
For Julian Day 151,	selecting COMIDA2	results # 4 of 9
For Julian Day 151,	selecting COMIDA2	results # 4 of 9
For Julian Day 151,	selecting COMIDA2	results # 4 of 9
For Julian Day 152,	selecting COMIDA2	results # 4 of 9
For Julian Day 152,	selecting COMIDA2	results # 4 of 9
For Julian Day 152,	selecting COMIDA2	results # 4 of 9
For Julian Day 152,	selecting COMIDA2	results # 4 of 9
For Julian Day 153,	selecting COMIDA2	results # 4 of 9
For Julian Day 154,	selecting COMIDA2	results # 4 of 9
For Julian Day 155,	selecting COMIDA2	results # 4 of 9
For Julian Day 155,	selecting COMIDA2	results # 4 of 9
For Julian Day 155,	selecting COMIDA2	results # 4 of 9
For Julian Day 155,	selecting COMIDA2	results # 4 of 9
For Julian Day 155,	selecting COMIDA2	results # 4 of 9
For Julian Day 156,	selecting COMIDA2	results # 4 of 9
For Julian Day 156,	selecting COMIDA2	results # 4 of 9
For Julian Day 156,	selecting COMIDA2	results # 4 of 9
For Julian Day 157,	selecting COMIDA2	results # 4 of 9
For Julian Day 158,	selecting COMIDA2	results # 4 of 9
For Julian Day 158,	selecting COMIDA2	results # 4 of 9
For Julian Day 159,	selecting COMIDA2	results # 4 of 9
For Julian Day 159,	selecting COMIDA2	results # 4 of 9
For Julian Day 161,	selecting COMIDA2	results # 4 of 9
For Julian Day 161,	selecting COMIDA2	results # 4 of 9
For Julian Day 161,	selecting COMIDA2	results # 4 of 9

Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001 Equip. No.	Approved by	Date

For Julian Day 161, selecting COMIDA2 results # 4 of 9
 For Julian Day 161, selecting COMIDA2 results # 4 of 9
 For Julian Day 161, selecting COMIDA2 results # 4 of 9
 For Julian Day 161, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 165, selecting COMIDA2 results # 4 of 9
 For Julian Day 165, selecting COMIDA2 results # 4 of 9
 For Julian Day 165, selecting COMIDA2 results # 4 of 9
 For Julian Day 165, selecting COMIDA2 results # 4 of 9
 For Julian Day 166, selecting COMIDA2 results # 4 of 9
 For Julian Day 166, selecting COMIDA2 results # 4 of 9
 For Julian Day 166, selecting COMIDA2 results # 4 of 9
 For Julian Day 168, selecting COMIDA2 results # 5 of 9
 For Julian Day 168, selecting COMIDA2 results # 5 of 9
 For Julian Day 168, selecting COMIDA2 results # 5 of 9
 For Julian Day 168, selecting COMIDA2 results # 5 of 9
 For Julian Day 168, selecting COMIDA2 results # 5 of 9
 For Julian Day 168, selecting COMIDA2 results # 5 of 9
 For Julian Day 168, selecting COMIDA2 results # 5 of 9
 For Julian Day 168, selecting COMIDA2 results # 5 of 9
 For Julian Day 168, selecting COMIDA2 results # 5 of 9
 For Julian Day 172, selecting COMIDA2 results # 5 of 9
 For Julian Day 172, selecting COMIDA2 results # 5 of 9
 For Julian Day 173, selecting COMIDA2 results # 5 of 9
 For Julian Day 173, selecting COMIDA2 results # 5 of 9
 For Julian Day 173, selecting COMIDA2 results # 5 of 9
 For Julian Day 176, selecting COMIDA2 results # 5 of 9
 For Julian Day 176, selecting COMIDA2 results # 5 of 9
 For Julian Day 176, selecting COMIDA2 results # 5 of 9
 For Julian Day 179, selecting COMIDA2 results # 5 of 9
 For Julian Day 179, selecting COMIDA2 results # 5 of 9
 For Julian Day 179, selecting COMIDA2 results # 5 of 9
 For Julian Day 182, selecting COMIDA2 results # 5 of 9
 For Julian Day 182, selecting COMIDA2 results # 5 of 9
 For Julian Day 182, selecting COMIDA2 results # 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-150 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 182,	selecting COMIDA2	results	# 5 of 9
For Julian Day 182,	selecting COMIDA2	results	# 5 of 9
For Julian Day 184,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 192,	selecting COMIDA2	results	# 6 of 9
For Julian Day 193,	selecting COMIDA2	results	# 6 of 9
For Julian Day 193,	selecting COMIDA2	results	# 6 of 9
For Julian Day 193,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 195,	selecting COMIDA2	results	# 6 of 9
For Julian Day 197,	selecting COMIDA2	results	# 6 of 9
For Julian Day 199,	selecting COMIDA2	results	# 6 of 9
For Julian Day 201,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 203,	selecting COMIDA2	results	# 6 of 9
For Julian Day 205,	selecting COMIDA2	results	# 6 of 9
For Julian Day 207,	selecting COMIDA2	results	# 6 of 9
For Julian Day 208,	selecting COMIDA2	results	# 6 of 9
For Julian Day 208,	selecting COMIDA2	results	# 6 of 9
For Julian Day 208,	selecting COMIDA2	results	# 6 of 9
For Julian Day 208,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 213,	selecting COMIDA2	results	# 6 of 9
For Julian Day 214,	selecting COMIDA2	results	# 6 of 9
For Julian Day 214,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-151 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 214,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 222,	selecting COMIDA2 results	# 7 of 9
For Julian Day 223,	selecting COMIDA2 results	# 7 of 9
For Julian Day 225,	selecting COMIDA2 results	# 7 of 9
For Julian Day 225,	selecting COMIDA2 results	# 7 of 9
For Julian Day 225,	selecting COMIDA2 results	# 7 of 9
For Julian Day 225,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 227,	selecting COMIDA2 results	# 7 of 9
For Julian Day 227,	selecting COMIDA2 results	# 7 of 9
For Julian Day 229,	selecting COMIDA2 results	# 7 of 9
For Julian Day 229,	selecting COMIDA2 results	# 7 of 9
For Julian Day 229,	selecting COMIDA2 results	# 7 of 9
For Julian Day 229,	selecting COMIDA2 results	# 7 of 9
For Julian Day 229,	selecting COMIDA2 results	# 7 of 9
For Julian Day 229,	selecting COMIDA2 results	# 7 of 9
For Julian Day 229,	selecting COMIDA2 results	# 7 of 9
For Julian Day 229,	selecting COMIDA2 results	# 7 of 9
For Julian Day 229,	selecting COMIDA2 results	# 7 of 9
For Julian Day 229,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 233,	selecting COMIDA2 results	# 7 of 9
For Julian Day 234,	selecting COMIDA2 results	# 7 of 9
For Julian Day 235,	selecting COMIDA2 results	# 7 of 9
For Julian Day 237,	selecting COMIDA2 results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-153 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 273,	selecting	COMIDA2	results # 8 of 9
For Julian Day 273,	selecting	COMIDA2	results # 8 of 9
For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 275,	selecting	COMIDA2	results # 8 of 9
For Julian Day 276,	selecting	COMIDA2	results # 8 of 9
For Julian Day 277,	selecting	COMIDA2	results # 8 of 9
For Julian Day 279,	selecting	COMIDA2	results # 8 of 9
For Julian Day 280,	selecting	COMIDA2	results # 8 of 9
For Julian Day 280,	selecting	COMIDA2	results # 8 of 9
For Julian Day 280,	selecting	COMIDA2	results # 8 of 9
For Julian Day 281,	selecting	COMIDA2	results # 8 of 9
For Julian Day 281,	selecting	COMIDA2	results # 8 of 9
For Julian Day 284,	selecting	COMIDA2	results # 8 of 9
For Julian Day 284,	selecting	COMIDA2	results # 8 of 9
For Julian Day 288,	selecting	COMIDA2	results # 9 of 9
For Julian Day 291,	selecting	COMIDA2	results # 9 of 9
For Julian Day 291,	selecting	COMIDA2	results # 9 of 9
For Julian Day 291,	selecting	COMIDA2	results # 9 of 9
For Julian Day 291,	selecting	COMIDA2	results # 9 of 9
For Julian Day 296,	selecting	COMIDA2	results # 9 of 9
For Julian Day 298,	selecting	COMIDA2	results # 9 of 9
For Julian Day 298,	selecting	COMIDA2	results # 9 of 9
For Julian Day 298,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 301,	selecting	COMIDA2	results # 9 of 9
For Julian Day 302,	selecting	COMIDA2	results # 9 of 9
For Julian Day 308,	selecting	COMIDA2	results # 9 of 9
For Julian Day 308,	selecting	COMIDA2	results # 9 of 9
For Julian Day 311,	selecting	COMIDA2	results # 9 of 9
For Julian Day 312,	selecting	COMIDA2	results # 9 of 9
For Julian Day 313,	selecting	COMIDA2	results # 9 of 9
For Julian Day 313,	selecting	COMIDA2	results # 9 of 9
For Julian Day 314,	selecting	COMIDA2	results # 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-154 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 314,	selecting COMIDA2 results	# 9 of 9
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9
For Julian Day 316,	selecting COMIDA2 results	# 9 of 9
For Julian Day 316,	selecting COMIDA2 results	# 9 of 9
For Julian Day 320,	selecting COMIDA2 results	# 9 of 9
For Julian Day 322,	selecting COMIDA2 results	# 9 of 9
For Julian Day 322,	selecting COMIDA2 results	# 9 of 9
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9
For Julian Day 329,	selecting COMIDA2 results	# 9 of 9
For Julian Day 330,	selecting COMIDA2 results	# 9 of 9
For Julian Day 331,	selecting COMIDA2 results	# 9 of 9
For Julian Day 331,	selecting COMIDA2 results	# 9 of 9
For Julian Day 332,	selecting COMIDA2 results	# 9 of 9
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9
For Julian Day 334,	selecting COMIDA2 results	# 1 of 9
For Julian Day 334,	selecting COMIDA2 results	# 1 of 9
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9
For Julian Day 337,	selecting COMIDA2 results	# 1 of 9
For Julian Day 341,	selecting COMIDA2 results	# 1 of 9
For Julian Day 341,	selecting COMIDA2 results	# 1 of 9
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-155 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 343,	selecting COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 348,	selecting COMIDA2	results	# 1 of 9
For Julian Day 348,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 351,	selecting COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting COMIDA2	results	# 1 of 9
For Julian Day 355,	selecting COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting COMIDA2	results	# 1 of 9
For Julian Day 357,	selecting COMIDA2	results	# 1 of 9
For Julian Day 362,	selecting COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting COMIDA2	results	# 1 of 9
For Julian Day 364,	selecting COMIDA2	results	# 1 of 9
For Julian Day 1,	selecting COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting COMIDA2	results	# 1 of 9
For Julian Day 4,	selecting COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting COMIDA2	results	# 1 of 9
For Julian Day 9,	selecting COMIDA2	results	# 1 of 9
For Julian Day 12,	selecting COMIDA2	results	# 1 of 9
For Julian Day 14,	selecting COMIDA2	results	# 1 of 9
For Julian Day 15,	selecting COMIDA2	results	# 1 of 9
For Julian Day 17,	selecting COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting COMIDA2	results	# 1 of 9
For Julian Day 21,	selecting COMIDA2	results	# 1 of 9
For Julian Day 22,	selecting COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-156 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 32,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 32,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 35,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 38,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 41,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 45,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 52,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 52,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 61,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 61,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 65,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 65,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 65,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 67,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 71,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-157 of 1.2-263

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 73,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 77,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 77,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 83,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 83,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 88,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 92,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 101,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 101,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 103,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 103,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 103,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 103,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.2-158 of 1.2-263	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 106,	selecting COMIDA2	results	# 3 of 9
For Julian Day 106,	selecting COMIDA2	results	# 3 of 9
For Julian Day 108,	selecting COMIDA2	results	# 3 of 9
For Julian Day 108,	selecting COMIDA2	results	# 3 of 9
For Julian Day 109,	selecting COMIDA2	results	# 3 of 9
For Julian Day 111,	selecting COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9
For Julian Day 113,	selecting COMIDA2	results	# 3 of 9
For Julian Day 113,	selecting COMIDA2	results	# 3 of 9
For Julian Day 113,	selecting COMIDA2	results	# 3 of 9
For Julian Day 113,	selecting COMIDA2	results	# 3 of 9
For Julian Day 113,	selecting COMIDA2	results	# 3 of 9
For Julian Day 113,	selecting COMIDA2	results	# 3 of 9
For Julian Day 113,	selecting COMIDA2	results	# 3 of 9
For Julian Day 115,	selecting COMIDA2	results	# 3 of 9
For Julian Day 115,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 122,	selecting COMIDA2	results	# 3 of 9
For Julian Day 122,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 126,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9
For Julian Day 129,	selecting COMIDA2	results	# 3 of 9
For Julian Day 129,	selecting COMIDA2	results	# 3 of 9
For Julian Day 129,	selecting COMIDA2	results	# 3 of 9
For Julian Day 129,	selecting COMIDA2	results	# 3 of 9
For Julian Day 129,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9

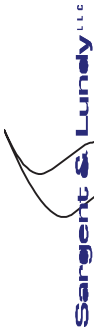


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-159 of 1.2-263

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

For Julian Day 132, selecting COMIDA2 results # 3 of 9
 For Julian Day 132, selecting COMIDA2 results # 3 of 9
 For Julian Day 136, selecting COMIDA2 results # 3 of 9
 For Julian Day 136, selecting COMIDA2 results # 3 of 9
 For Julian Day 140, selecting COMIDA2 results # 4 of 9
 For Julian Day 141, selecting COMIDA2 results # 4 of 9
 For Julian Day 141, selecting COMIDA2 results # 4 of 9
 For Julian Day 142, selecting COMIDA2 results # 4 of 9
 For Julian Day 143, selecting COMIDA2 results # 4 of 9
 For Julian Day 145, selecting COMIDA2 results # 4 of 9
 For Julian Day 145, selecting COMIDA2 results # 4 of 9
 For Julian Day 145, selecting COMIDA2 results # 4 of 9
 For Julian Day 147, selecting COMIDA2 results # 4 of 9
 For Julian Day 148, selecting COMIDA2 results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.2-163 of 1.2-263	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

L-EDEWBODY 05 338	TOT LIF	0-16.1 km	0.9399	5.99E+01	1.47E+01	1.70E+02	2.57E+02	4.97E+02	5.81E+02	1.57E+03	4.09E-
L-EDEWBODY 06 172	TOT LIF	0-80.5 km	1.0000	1.25E+04	9.14E+03	2.74E+04	3.13E+04	3.63E+04	3.86E+04	5.40E+04	9.51E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	04 217	0-80.5 km	1.0000	7.42E-05	5.04E-05	1.60E-04	2.09E-04	2.87E-04	3.15E-04	4.54E-04	1.64E-
CAN FAT/TOTAL	05 318	0-16.1 km	0.9399	5.74E-05	1.35E-05	1.57E-04	2.33E-04	4.87E-04	6.85E-04	1.84E-03	2.85E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 03 175		0-1.6 km	1.0000	3.04E+00	2.38E+00	5.84E+00	7.47E+00	1.26E+01	1.73E+01	1.85E+01	4.33E-



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			Rev. 2	Date
Safety Related	X	Non-Safety Related	Page 1.2-164 of 1.2-263	
Client PSEG Nuclear Development		Prepared by		
Project PSEG ESPA		Reviewed by		
Proj. No 12380-001		Approved by		
Equip. No.		Date		

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = AP1000 ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 1 OF 6:
CFI

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 2 = NO EVACUATION

10-JAN-10 17:34:18	PAGE 3	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	6.73E+02	4.76E+02	1.37E+03	1.75E+03	2.49E+03	2.82E+03	3.76E+03	1.64E-
04 217	0-16.1 km	1.0000	7.22E+01	4.12E+01	1.69E+02	2.34E+02	4.95E+02	6.14E+02	9.51E+02	6.66E-
05 81	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00	0									
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00	0									

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.2291	4.47E+00	0.00E+00	5.91E+00	2.51E+01	1.03E+02	1.26E+02	3.67E+02	1.52E-
04 176									
EARLY dose L-EDEWBODY > 0.250 Sv	0.9154	1.24E+03	2.83E+02	3.10E+03	4.55E+03	1.51E+04	2.05E+04	2.92E+04	5.71E-
05 334									

POPULATION DOSE (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-165 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 373	0-16.1 km	1.0000	9.53E+02	6.23E+02	2.18E+03	2.87E+03	5.35E+03	6.89E+03	1.01E+04	1.61E-
L-EDEWBODY TOT LIF 06 172	0-80.5 km	1.0000	1.34E+04	1.00E+04	2.95E+04	3.21E+04	3.77E+04	4.05E+04	5.67E+04	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 217	0-80.5 km	1.0000	8.26E-05	5.84E-05	1.79E-04	2.22E-04	3.08E-04	3.30E-04	4.62E-04	1.64E-
CAN FAT/TOTAL 05 81	0-16.1 km	1.0000	1.19E-03	7.08E-04	2.83E-03	3.81E-03	7.65E-03	1.00E-02	1.56E-02	6.66E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 349	0-1.6 km	1.0000	2.17E+01	1.61E+01	4.18E+01	5.64E+01	8.88E+01	1.05E+02	1.58E+02	8.75E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.2-166 of 1.2-263		

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = AP1000 ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

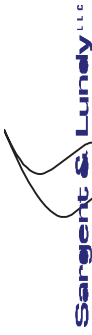
SOURCE TERM 1 OF 6:
CFI

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:34:18	PAGE 4	PROB	QUANTILES					PEAK	PEAK	
		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PROB
TRIAL										
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.48E+03	1.19E+03	2.85E+03	3.25E+03	4.10E+03	4.53E+03	6.82E+03	4.85E-
04 59										
CAN FAT/TOTAL	0-16.1 km	1.0000	4.50E+01	3.85E+01	7.90E+01	9.60E+01	1.12E+02	1.18E+02	2.19E+02	6.46E-
06 370										
POPULATION DOSE (Sv)										
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	1.13E+03	1.02E+03	2.02E+03	2.38E+03	3.12E+03	3.27E+03	5.47E+03	6.46E-
06 370										
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	4.06E+04	3.40E+04	7.59E+04	8.77E+04	1.16E+05	1.29E+05	1.83E+05	4.85E-
04 59										
POPULATION WEIGHTED RISK										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.58E-04	1.23E-04	3.07E-04	3.44E-04	4.51E-04	5.05E-04	7.41E-04	4.85E-
04 59										
CAN FAT/TOTAL	0-16.1 km	1.0000	3.13E-04	2.83E-04	5.63E-04	6.62E-04	7.73E-04	8.12E-04	1.11E-03	6.46E-
06 44										

PEAK DOSE FOUND ON SPATIAL GRID (SV)



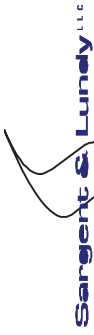
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.2-167 of 1.2-263	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 41	0-1.6 km	1.0000	9.15E-02	8.93E-02	1.06E-01	1.08E-01	1.15E-01	1.18E-01	1.32E-01	2.85E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 06 370	0-16.1 km	1.0000	1.13E+03	1.02E+03	2.02E+03	2.38E+03	3.12E+03	3.27E+03	5.47E+03	6.46E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 06 44		1.0000	5.69E+02	5.19E+02	1.01E+03	1.06E+03	1.18E+03	1.24E+03	1.97E+03	6.46E-
TOTAL INGESTION PATHWAYS DOSE 05 75		1.0000	9.27E+01	8.02E+01	1.55E+02	1.97E+02	2.68E+02	3.02E+02	4.51E+02	1.43E-
LONG-TERM GROUNDSHINE DOSE 06 44		1.0000	2.55E+02	2.14E+02	4.77E+02	6.08E+02	9.09E+02	1.01E+03	1.38E+03	6.46E-
LONG-TERM RESUSPENSION DOSE 04 157		1.0000	3.14E+02	2.75E+02	5.60E+02	6.46E+02	7.65E+02	8.05E+02	1.02E+03	2.63E-
WATER INGESTION DOSE 05 345		0.9971	6.12E+01	5.13E+01	1.23E+02	1.57E+02	2.28E+02	2.53E+02	4.27E+02	5.71E-
POP.-DEPENDENT DECONTAMINATION DOSE 06 370		1.0000	4.47E+02	3.47E+02	9.05E+02	1.12E+03	1.69E+03	2.01E+03	3.82E+03	6.46E-
FARM-DEPENDENT DECONTAMINATION DOSE 03 72		1.0000	1.78E+01	1.38E+01	3.30E+01	3.85E+01	5.39E+01	6.08E+01	7.82E+01	1.26E-
INGESTION OF GRAINS 06 203		1.0000	9.51E-01	8.72E-01	1.48E+00	1.79E+00	2.30E+00	2.50E+00	3.58E+00	5.90E-
INGESTION OF LEAF VEG 06 203		1.0000	9.03E+00	8.27E+00	1.38E+01	1.63E+01	2.23E+01	2.45E+01	3.78E+01	5.90E-
INGESTION OF ROOT CROPS 06 203		1.0000	4.84E+00	4.25E+00	8.13E+00	9.59E+00	1.18E+01	1.27E+01	2.44E+01	5.90E-
INGESTION OF FRUITS 06 203		1.0000	2.06E+00	1.90E+00	3.35E+00	3.78E+00	5.01E+00	5.27E+00	8.11E+00	5.90E-
INGESTION OF LEGUMES 06 203		1.0000	8.63E+00	7.72E+00	1.37E+01	1.64E+01	2.26E+01	2.50E+01	4.58E+01	5.90E-
INGESTION OF BEEF 05 306		1.0000	1.21E+00	7.74E-01	2.66E+00	3.37E+00	5.16E+00	5.80E+00	9.19E+00	1.90E-
INGESTION OF MILK 04 263		1.0000	4.16E+00	3.65E+00	6.71E+00	7.72E+00	1.01E+01	1.07E+01	1.37E+01	1.64E-



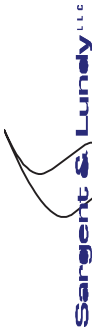
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.2-168 of 1.2-263		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 04 193	1.0000	3.08E-01	2.27E-01	6.94E-01	8.67E-01	1.24E+00	1.41E+00	2.05E+00	7.52E-
INGESTION OF OTHER MEAT CROPS 04 193	1.0000	3.34E-01	2.49E-01	6.81E-01	8.52E-01	1.23E+00	1.40E+00	2.09E+00	7.52E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 59	1.0000	4.06E+04	3.40E+04	7.59E+04	8.77E+04	1.16E+05	1.29E+05	1.83E+05	4.85E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 59	1.0000	3.62E+04	3.07E+04	7.07E+04	8.01E+04	1.05E+05	1.17E+05	1.64E+05	4.85E-
TOTAL INGESTION PATHWAYS DOSE 04 59	1.0000	6.37E+02	5.88E+02	9.50E+02	1.08E+03	1.40E+03	1.57E+03	2.30E+03	3.42E-
LONG-TERM GROUNDSHINE DOSE 04 59	1.0000	1.79E+04	1.34E+04	3.53E+04	4.36E+04	5.97E+04	6.65E+04	1.10E+05	4.85E-
LONG-TERM RESUSPENSION DOSE 04 3	1.0000	1.83E+04	1.49E+04	3.33E+04	3.78E+04	5.02E+04	5.33E+04	7.24E+04	1.99E-
WATER INGESTION DOSE 05 345	1.0000	1.42E+02	1.17E+02	2.43E+02	2.94E+02	3.76E+02	4.16E+02	5.90E+02	5.71E-



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related	Rev. 2	Date
			Page 1.2-170 of 1.2-263	
Client PSEG Nuclear Development		Prepared by		
Project PSEG ESPA		Reviewed by		
Proj. No 12380-001		Approved by		
Equip. No.				

POP.-DEPENDENT DECONTAMINATION COST 04 243	1.0000	7.78E+09	6.14E+09	1.47E+10	1.88E+10	2.38E+10	2.59E+10	4.06E+10	1.14E-
FARM-DEPENDENT DECONTAMINATION COST 05 117	1.0000	1.13E+08	1.04E+08	1.54E+08	1.83E+08	2.15E+08	2.24E+08	3.08E+08	3.91E-
POP.-DEPENDENT INTERDICTION COST 05 117	1.0000	2.35E+10	1.70E+10	5.09E+10	6.07E+10	7.80E+10	8.38E+10	1.13E+11	1.52E-
FARM-DEPENDENT INTERDICTION COST 05 162	1.0000	1.53E+08	1.16E+08	3.13E+08	3.65E+08	5.06E+08	5.29E+08	7.20E+08	1.10E-
POP.-DEPENDENT CONDEMNATION COST 04 171	0.0080	2.60E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.27E+05	2.19E+07	7.01E-
FARM-DEPENDENT CONDEMNATION COST 05 350	1.0000	2.70E+07	2.31E+07	4.40E+07	1.00E+08	1.07E+08	1.10E+08	1.39E+08	1.47E-
EMERGENCY PHASE COST 04 243	1.0000	5.46E+08	4.37E+08	1.03E+09	1.11E+09	1.29E+09	1.38E+09	1.98E+09	1.14E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 04 59	1.0000	2.28E+06	9.84E+05	5.83E+06	1.07E+07	1.39E+07	1.56E+07	2.82E+07	2.57E-
CROP DISPOSAL COST 05 162	1.0000	1.33E+08	9.82E+07	3.01E+08	3.72E+08	5.27E+08	5.58E+08	8.14E+08	2.57E-
AFFECTED AREA/POPULATION 0-80.5 km									
FARM DECONTAMINATION (HECTARES) 05 111	1.0000	7.96E+04	7.35E+04	1.11E+05	1.21E+05	1.48E+05	1.62E+05	2.13E+05	9.51E-
POP. DECONTAMINATION (INDIVIDUALS) 05 117	1.0000	1.02E+06	7.17E+05	2.19E+06	2.73E+06	3.27E+06	3.42E+06	5.03E+06	1.52E-
FARM INTERDICTION (HECTARES) 05 162	1.0000	9.67E+04	8.59E+04	1.45E+05	1.75E+05	2.22E+05	2.36E+05	3.44E+05	1.10E-
POP. INTERDICTION (INDIVIDUALS) 05 117	1.0000	1.02E+06	7.17E+05	2.19E+06	2.73E+06	3.27E+06	3.42E+06	5.03E+06	1.52E-
FARM CONDEMNATION (HECTARES) 05 350	1.0000	1.72E+03	1.29E+03	2.94E+03	5.75E+03	7.85E+03	8.44E+03	1.01E+04	1.47E-
POP. CONDEMNATION (INDIVIDUALS) 04 171	0.0080	8.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.68E+00	7.00E+01	7.01E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-172 of 1.2-263

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date

MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 6

SOURCE TERM 1 OF 6:
CFI

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	PROB>=X	X	PROB>=X
1.00E-06	1.00E+00	1.00E-05	1.00E-08
2.00E-06	1.00E+00	2.00E-05	2.00E-08
3.00E-06	1.00E+00	3.00E-05	3.00E-08
5.00E-06	1.00E+00	5.00E-05	5.00E-08
7.00E-06	1.00E+00	7.00E-05	7.00E-08
1.00E-05	1.00E+00	1.00E-04	1.00E-07
2.00E-05	1.00E+00	2.00E-04	2.00E-07
3.00E-05	1.00E+00	3.00E-04	3.00E-07
5.00E-05	1.00E+00	5.00E-04	5.00E-07
7.00E-05	1.00E+00	7.00E-04	7.00E-07
1.00E-04	1.00E+00	1.00E-03	1.00E-06
2.00E-04	1.00E+00	2.00E-03	2.00E-06
3.00E-04	1.00E+00	3.00E-03	3.00E-06
5.00E-04	1.00E+00	5.00E-03	5.00E-06
7.00E-04	1.00E+00	7.00E-03	7.00E-06
1.00E-03	1.00E+00	1.00E-02	1.00E-05
2.00E-03	1.00E+00	2.00E-02	2.00E-05
3.00E-03	1.00E+00	3.00E-02	3.00E-05
5.00E-03	1.00E+00	5.00E-02	5.00E-05
7.00E-03	1.00E+00	7.00E-02	7.00E-05
1.00E-02	1.00E+00	1.00E-01	1.00E-04
2.00E-02	9.88E-01	2.00E-01	2.00E-04



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-179 of 1.2-263

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	Prepared by
Project	PSEG ESPA	Reviewed by
Proj. No	12380-001	Approved by
Equip. No.		Date

ERL FAT/TOTAL 0.00E+00	0 -3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0 -1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
POPULATION EXCEEDING DOSE												
EARLY dose L-EDEWBODY > 2.00 Sv 04 175		0.1766	1.19E-01	0.00E+00	1.20E-01	5.30E-01	3.25E+00	4.85E+00	1.52E+01	1.33E-		
EARLY dose L-EDEWBODY > 0.250 Sv 05 367		0.8275	4.75E+01	6.98E+00	1.48E+02	2.39E+02	4.36E+02	5.74E+02	1.30E+03	1.24E-		
POPULATION DOSE (Sv)												
L-EDEWBODY TOT LIF 04 226	0 -16.1 km	1.0000	9.74E+02	7.53E+02	2.08E+03	2.57E+03	4.53E+03	5.26E+03	7.73E+03	1.95E-		
L-EDEWBODY TOT LIF 04 115	0 -80.5 km	1.0000	4.00E+04	2.24E+04	1.00E+05	1.11E+05	1.38E+05	1.52E+05	2.56E+05	1.19E-		
POPULATION WEIGHTED RISK												
ERL FAT/TOTAL 05 349	0 -80.5 km	0.0007	1.82E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-09	4.76E-		
ERL FAT/TOTAL 0.00E+00	0 -3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
ERL FAT/TOTAL 0.00E+00	0 -1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
ERL FAT/TOTAL 05 349	3.2-4.8 km	0.0007	1.27E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-04	4.76E-		
CAN FAT/TOTAL 04 115	0 -80.5 km	1.0000	2.16E-04	1.20E-04	5.28E-04	6.34E-04	7.93E-04	8.50E-04	1.26E-03	1.19E-		
CAN FAT/TOTAL 05 333	0 -16.1 km	1.0000	5.21E-04	3.69E-04	1.17E-03	1.51E-03	2.30E-03	2.57E-03	5.78E-03	4.76E-		
PEAK DOSE FOUND ON SPATIAL GRID (Sv)												
L-EDEWBODY 04 176	0 -1.6 km	1.0000	5.11E+00	3.84E+00	9.46E+00	1.21E+01	2.13E+01	2.70E+01	3.20E+01	4.57E-		

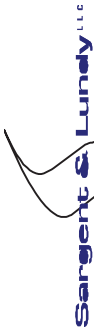


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-181 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 04 365	0-16.1 km	0.9442	8.17E+01	2.08E+01	2.35E+02	3.39E+02	6.66E+02	8.18E+02	3.15E+03	1.36E-
L-EDEWBODY TOT LIF 04 334	0-80.5 km	1.0000	6.87E+03	3.93E+03	1.64E+04	2.10E+04	2.73E+04	3.04E+04	4.34E+04	1.33E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 05 345	0-80.5 km	1.0000	5.25E-05	3.06E-05	1.23E-04	1.53E-04	2.14E-04	2.27E-04	3.31E-04	5.71E-
CAN FAT/TOTAL 04 365	0-16.1 km	0.9442	9.78E-05	2.30E-05	2.73E-04	4.26E-04	8.51E-04	1.09E-03	4.50E-03	1.36E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 176	0-1.6 km	1.0000	4.35E+00	3.39E+00	8.10E+00	1.00E+01	1.96E+01	2.12E+01	2.64E+01	4.57E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-183 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 210	0-16.1 km	1.0000	6.34E+02	3.51E+02	1.44E+03	2.02E+03	4.18E+03	5.36E+03	1.10E+04	1.90E-
L-EDEWBODY TOT LIF 04 334	0-80.5 km	1.0000	7.42E+03	4.48E+03	1.70E+04	2.13E+04	2.82E+04	3.11E+04	4.49E+04	1.33E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 05 349	0-80.5 km	0.0007	3.65E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.66E-08	4.76E-
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL 05 349	3.2-4.8 km	0.0007	2.54E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-03	4.76E-
CAN FAT/TOTAL 04 334	0-80.5 km	1.0000	5.89E-05	3.63E-05	1.30E-04	1.63E-04	2.17E-04	2.29E-04	3.44E-04	1.33E-
CAN FAT/TOTAL 05 210	0-16.1 km	1.0000	9.48E-04	5.01E-04	2.27E-03	3.17E-03	6.86E-03	8.65E-03	1.88E-02	1.90E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 176	0-1.6 km	1.0000	1.83E+01	1.28E+01	3.51E+01	4.45E+01	7.87E+01	9.49E+01	1.37E+02	4.57E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-184 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = AP1000 ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

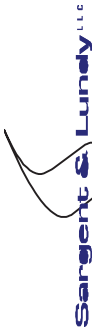
SOURCE TERM 2 OF 6:
CFE

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:34:18	PAGE 10	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.47E+03	8.12E+02	3.47E+02	3.47E+03	4.33E+03	5.90E+03	6.51E+03	1.02E+04	1.19E-
04 115											
CAN FAT/TOTAL	0-16.1 km	1.0000	3.89E+01	3.06E+01	7.97E+01	7.97E+01	1.00E+02	1.85E+02	2.05E+02	2.86E+02	1.24E-
05 86											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	8.65E+02	6.69E+02	1.80E+03	2.34E+03	3.90E+03	4.83E+03	6.54E+03	6.54E+03	1.24E-
05 86											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	3.31E+04	1.85E+04	8.03E+04	1.01E+05	1.26E+05	1.38E+05	2.31E+05	2.31E+05	1.19E-
04 115											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.63E-04	8.81E-05	3.94E-04	5.17E-04	7.22E-04	7.71E-04	1.09E-03	1.09E-03	1.19E-
04 115											
CAN FAT/TOTAL	0-16.1 km	1.0000	3.81E-04	2.81E-04	8.42E-04	1.06E-03	1.67E-03	2.01E-03	2.57E-03	2.57E-03	1.24E-
05 86											

PEAK DOSE FOUND ON SPATIAL GRID (Sv)



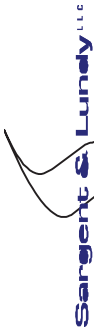
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.2-185 of 1.2-263	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 205	0-1.6 km	0.9770	5.96E-02	5.64E-02	1.03E-01	1.06E-01	1.13E-01	1.15E-01	1.28E-01	2.76E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 86	0-16.1 km	1.0000	8.65E+02	6.69E+02	1.80E+03	2.34E+03	3.90E+03	4.83E+03	6.54E+03	1.24E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 86		1.0000	5.24E+02	3.68E+02	1.18E+03	1.53E+03	2.30E+03	2.57E+03	3.58E+03	1.24E-
TOTAL INGESTION PATHWAYS DOSE 05 349		1.0000	1.12E+02	8.56E+01	2.26E+02	3.13E+02	5.08E+02	5.94E+02	9.82E+02	7.61E-
LONG-TERM GROUNDSHINE DOSE 05 86		1.0000	5.10E+02	3.57E+02	1.15E+03	1.49E+03	2.24E+03	2.47E+03	3.56E+03	1.24E-
LONG-TERM RESUSPENSION DOSE 05 350		1.0000	1.41E+01	7.78E+00	3.52E+01	4.98E+01	8.38E+01	9.98E+01	1.38E+02	1.47E-
WATER INGESTION DOSE 05 349		0.9965	8.97E+01	6.22E+01	2.07E+02	2.97E+02	4.86E+02	5.60E+02	9.70E+02	7.61E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 86		0.9977	2.18E+02	1.08E+02	5.40E+02	7.41E+02	1.53E+03	2.01E+03	2.78E+03	1.24E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 86		1.0000	1.08E+01	1.02E+01	1.81E+01	2.15E+01	2.84E+01	3.08E+01	4.75E+01	1.13E-
INGESTION OF GRAINS 05 87		1.0000	6.34E-01	5.72E-01	1.04E+00	1.13E+00	1.36E+00	1.48E+00	2.52E+00	1.79E-
INGESTION OF LEAF VEG 06 204		1.0000	4.96E+00	4.46E+00	8.15E+00	9.57E+00	1.09E+01	1.14E+01	1.73E+01	5.90E-
INGESTION OF ROOT CROPS 05 60		1.0000	3.02E+00	2.76E+00	5.07E+00	5.71E+00	7.18E+00	7.50E+00	1.07E+01	1.52E-
INGESTION OF FRUITS 06 204		1.0000	2.62E+00	2.34E+00	4.23E+00	5.08E+00	6.49E+00	7.09E+00	1.32E+01	5.90E-
INGESTION OF LEGUMES 06 204		1.0000	5.90E+00	5.44E+00	9.98E+00	1.06E+01	1.22E+01	1.29E+01	2.09E+01	5.90E-
INGESTION OF BEEF 05 311		1.0000	1.92E+00	1.41E+00	3.61E+00	4.75E+00	7.11E+00	8.09E+00	1.05E+01	1.62E-
INGESTION OF MILK 04 291		1.0000	2.51E+00	2.13E+00	4.41E+00	5.55E+00	7.78E+00	8.55E+00	1.17E+01	1.52E-



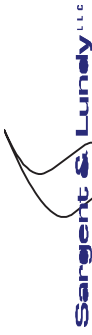
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.2-186 of 1.2-263		

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
		Approved by		Date	

INGESTION OF POULTRY 06 164	1.0000	5.43E-01	4.66E-01	9.79E-01	1.11E+00	1.47E+00	1.66E+00	3.27E+00	4.07E-
INGESTION OF OTHER MEAT CROPS 05 200	1.0000	1.91E-01	1.62E-01	3.19E-01	3.68E-01	5.14E-01	5.87E-01	1.15E+00	3.35E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 115	1.0000	3.31E+04	1.85E+04	8.03E+04	1.01E+05	1.26E+05	1.38E+05	2.31E+05	1.19E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 115	1.0000	2.99E+04	1.65E+04	7.39E+04	9.26E+04	1.18E+05	1.28E+05	2.01E+05	1.19E-
TOTAL INGESTION PATHWAYS DOSE 04 386	1.0000	4.50E+02	3.91E+02	7.06E+02	8.12E+02	1.10E+03	1.23E+03	1.84E+03	4.47E-
LONG-TERM GROUNDSHINE DOSE 04 115	1.0000	2.88E+04	1.58E+04	7.22E+04	8.97E+04	1.16E+05	1.26E+05	1.96E+05	1.19E-
LONG-TERM RESUSPENSION DOSE 05 349	1.0000	1.03E+03	5.94E+02	2.55E+03	3.25E+03	4.66E+03	5.15E+03	9.05E+03	6.66E-
WATER INGESTION DOSE 06 41	1.0000	2.12E+02	1.46E+02	4.39E+02	5.74E+02	8.08E+02	8.94E+02	1.49E+03	9.96E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-188 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

POP.-DEPENDENT DECONTAMINATION COST 05 288	1.0000	6.07E+09	3.30E+09	1.52E+10	2.15E+10	3.10E+10	3.26E+10	4.95E+10	1.90E-
FARM-DEPENDENT DECONTAMINATION COST 04 288	1.0000	8.03E+07	6.75E+07	1.25E+08	1.47E+08	2.06E+08	2.19E+08	3.18E+08	1.52E-
POP.-DEPENDENT INTERDICTION COST 05 350	1.0000	1.61E+10	8.65E+09	4.33E+10	5.49E+10	7.31E+10	7.77E+10	1.26E+11	1.41E-
FARM-DEPENDENT INTERDICTION COST 05 29	1.0000	2.09E+08	1.62E+08	3.89E+08	4.95E+08	5.89E+08	6.33E+08	8.40E+08	7.97E-
POP.-DEPENDENT CONDEMNATION COST 05 89	0.6855	9.71E+07	5.13E+06	1.40E+08	2.57E+08	1.60E+09	2.34E+09	6.22E+09	5.38E-
FARM-DEPENDENT CONDEMNATION COST 05 25	1.0000	3.38E+06	2.63E+06	7.49E+06	8.59E+06	2.09E+07	2.44E+07	3.33E+07	1.13E-
EMERGENCY PHASE COST 05 288	1.0000	1.66E+08	8.30E+07	4.68E+08	6.50E+08	7.71E+08	8.07E+08	1.36E+09	1.90E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 05 164	1.0000	5.16E+06	2.33E+06	1.35E+07	1.93E+07	2.51E+07	2.79E+07	3.32E+07	1.34E-
CROP DISPOSAL COST 05 133	1.0000	1.92E+08	1.59E+08	3.30E+08	3.84E+08	5.08E+08	5.23E+08	6.29E+08	5.58E-
AFFECTED AREA/POPULATION 0-80.5 km									
FARM DECONTAMINATION (HECTARES) 04 288	1.0000	4.35E+04	3.68E+04	7.39E+04	8.03E+04	9.74E+04	1.08E+05	1.84E+05	1.52E-
POP. DECONTAMINATION (INDIVIDUALS) 05 288	1.0000	5.42E+05	3.01E+05	1.45E+06	2.02E+06	2.29E+06	2.42E+06	4.31E+06	1.90E-
FARM INTERDICTION (HECTARES) 05 4	1.0000	8.27E+04	7.07E+04	1.44E+05	1.83E+05	2.14E+05	2.22E+05	2.71E+05	8.97E-
POP. INTERDICTION (INDIVIDUALS) 05 288	1.0000	5.42E+05	3.01E+05	1.45E+06	2.02E+06	2.29E+06	2.42E+06	4.31E+06	1.90E-
FARM CONDEMNATION (HECTARES) 05 25	1.0000	2.19E+02	1.63E+02	5.33E+02	6.07E+02	1.11E+03	1.45E+03	2.44E+03	1.13E-
POP. CONDEMNATION (INDIVIDUALS) 05 89	0.6855	3.33E+02	2.06E+01	4.70E+02	6.82E+02	6.12E+03	8.05E+03	1.98E+04	5.38E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No.	2009-11222
Rev.	2
Date	
Page	1.2-190 of 1.2-263

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

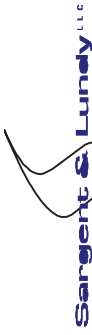
MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 12

SOURCE TERM 2 OF 6:
CFE

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	PROB>=X	PROB>=X	PROB>=X
1.00E-06	1.00E+00	1.00E+00	1.00E-07
2.00E-06	1.00E+00	1.00E+00	2.00E-07
3.00E-06	1.00E+00	1.00E+00	3.00E-07
5.00E-06	1.00E+00	1.00E+00	5.00E-07
7.00E-06	1.00E+00	1.00E+00	7.00E-07
1.00E-05	1.00E+00	1.00E+00	1.00E-06
2.00E-05	1.00E+00	1.00E+00	2.00E-06
3.00E-05	1.00E+00	1.00E+00	3.00E-06
5.00E-05	1.00E+00	1.00E+00	5.00E-06
7.00E-05	1.00E+00	1.00E+00	7.00E-06
1.00E-04	1.00E+00	1.00E+00	1.00E-05
2.00E-04	1.00E+00	1.00E+00	2.00E-05
3.00E-04	1.00E+00	1.00E+00	3.00E-05
5.00E-04	1.00E+00	1.00E+00	5.00E-05
7.00E-04	1.00E+00	1.00E+00	7.00E-05
1.00E-03	1.00E+00	1.00E+00	1.00E-04
2.00E-03	1.00E+00	1.00E+00	2.00E-04
3.00E-03	1.00E+00	1.00E+00	3.00E-04
5.00E-03	1.00E+00	1.00E+00	5.00E-04
7.00E-03	1.00E+00	1.00E+00	7.00E-04
1.00E-02	1.00E+00	1.00E+00	1.00E-03
2.00E-02	1.00E+00	1.00E+00	2.00E-03
3.00E-02	1.00E+00	1.00E+00	3.00E-03
5.00E-02	1.00E+00	1.00E+00	5.00E-03
7.00E-02	1.00E+00	1.00E+00	7.00E-03
1.00E-01	1.00E+00	1.00E+00	1.00E-02
2.00E-01	1.00E+00	1.00E+00	2.00E-02
3.00E-01	1.00E+00	1.00E+00	3.00E-02
5.00E-01	1.00E+00	1.00E+00	5.00E-02
7.00E-01	1.00E+00	1.00E+00	7.00E-02
1.00E-00	1.00E+00	1.00E+00	1.00E-01
2.00E-00	1.00E+00	1.00E+00	2.00E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222		
Rev. 2	Date	
Page 1.2-197 of 1.2-263		

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	

ERL FAT/TOTAL	0	0-3.2 km	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
POPULATION EXCEEDING DOSE													
EARLY dose	0	L-EDEWBODY > 2.00 Sv	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EARLY dose	0	L-EDEWBODY > 0.250 Sv	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
POPULATION DOSE (Sv)													
L-EDEWBODY	04	TOT LIF	1.0000	9.69E+00	6.80E+00	2.17E+01	2.84E+01	5.11E+01	6.12E+01	1.34E+02	1.79E-	1.79E-	1.79E-
L-EDEWBODY	04	TOT LIF	1.0000	1.05E+02	6.47E+01	2.50E+02	3.15E+02	4.56E+02	5.22E+02	8.82E+02	4.85E-	4.85E-	4.85E-
POPULATION WEIGHTED RISK													
ERL FAT/TOTAL	0	0-80.5 km	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-3.2 km	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	3.2-4.8 km	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	04	0-80.5 km	1.0000	5.18E-07	2.82E-07	1.24E-06	1.56E-06	2.44E-06	2.85E-06	4.57E-06	4.85E-	4.85E-	4.85E-
CAN FAT/TOTAL	04	0-16.1 km	1.0000	5.00E-06	2.73E-06	1.19E-05	1.64E-05	3.36E-05	4.17E-05	9.41E-05	1.79E-	1.79E-	1.79E-
PEAK DOSE FOUND ON SPATIAL GRID (Sv)													
L-EDEWBODY	03	0-1.6 km	1.0000	2.87E-02	2.66E-02	4.29E-02	5.02E-02	5.46E-02	5.67E-02	5.80E-02	3.17E-	3.17E-	3.17E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = AP1000 ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 3 OF 6:
 IC

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

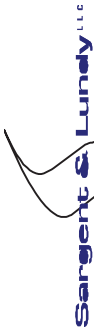
COHORT 1 = 95% EVACUATION

10-JAN-10 17:34:18	PAGE 14	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	5.65E-01	3.09E-01	1.36E+00	1.78E+00	2.48E+00	2.78E+00	4.05E+00	8.94E-
04 333	0-16.1 km	0.9432	2.12E-03	5.39E-04	6.28E-03	8.82E-03	1.65E-02	2.08E-02	6.57E-02	5.71E-
05 181	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										
EARLY dose L-EDEWBODY > 0.250 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										

POPULATION DOSE (Sv)

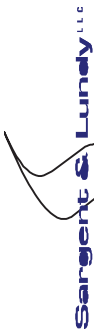


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-199 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 181	0-16.1 km	0.9432	3.50E-02	8.85E-03	1.04E-01	1.46E-01	2.80E-01	3.36E-01	1.09E+00	5.71E-
L-EDEWBODY TOT LIF 04 333	0-80.5 km	1.0000	1.04E+01	5.59E+00	2.65E+01	3.26E+01	4.56E+01	5.22E+01	7.34E+01	8.94E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 333	0-80.5 km	1.0000	6.94E-08	3.74E-08	1.73E-07	2.20E-07	3.13E-07	3.58E-07	4.98E-07	8.94E-
CAN FAT/TOTAL 05 181	0-16.1 km	0.9432	3.48E-08	8.78E-09	1.04E-07	1.46E-07	2.80E-07	3.35E-07	1.08E-06	5.71E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 03 175	0-1.6 km	1.0000	1.74E-03	1.29E-03	3.35E-03	4.37E-03	6.99E-03	1.15E-02	1.21E-02	4.33E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-201 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

L-EDEWBODY 04 217	TOT LIF	0-16.1 km	1.0000	9.52E-01	5.28E-01	2.27E+00	3.14E+00	6.29E+00	7.78E+00	1.91E+01	1.79E-
L-EDEWBODY 04 333	TOT LIF	0-80.5 km	1.0000	1.13E+01	6.33E+00	2.84E+01	3.36E+01	4.61E+01	5.24E+01	7.61E+01	8.94E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0-80.5 km	1.0000	7.56E-08	4.26E-08	1.90E-07	2.30E-07	3.27E-07	3.69E-07	5.16E-07	8.94E-	
CAN FAT/TOTAL	0-16.1 km	1.0000	8.55E-07	4.81E-07	2.06E-06	2.84E-06	5.68E-06	7.00E-06	1.73E-05	1.79E-	
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 04 211		0-1.6 km	1.0000	1.46E-02	1.03E-02	2.73E-02	3.88E-02	6.98E-02	1.01E-01	1.13E-01	8.75E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page		1.2-202 of 1.2-263	

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = AP1000 ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

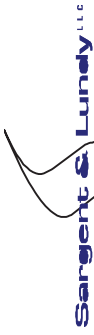
SOURCE TERM 3 OF 6:
 IC

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:34:18	PAGE 16	PROB	QUANTILES					PEAK	PEAK	
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH		
TRIAL										
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	4.12E+00	2.56E+00	9.91E+00	1.18E+01	1.77E+01	2.07E+01	3.56E+01	4.85E-
04 85										
CAN FAT/TOTAL	0-16.1 km	1.0000	4.26E-01	3.04E-01	9.66E-01	1.25E+00	2.18E+00	2.62E+00	5.73E+00	1.79E-
04 217										
POPULATION DOSE (Sv)										
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	9.61E+00	6.70E+00	2.15E+01	2.79E+01	5.03E+01	6.08E+01	1.33E+02	1.79E-
04 217										
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	9.46E+01	5.86E+01	2.23E+02	2.81E+02	4.17E+02	4.90E+02	8.26E+02	4.85E-
04 85										
POPULATION WEIGHTED RISK										
CAN FAT/TOTAL	0-80.5 km	1.0000	4.48E-07	2.46E-07	1.10E-06	1.35E-06	2.10E-06	2.39E-06	4.23E-06	4.85E-
04 85										
CAN FAT/TOTAL	0-16.1 km	1.0000	4.92E-06	2.69E-06	1.18E-05	1.62E-05	3.32E-05	4.14E-05	9.33E-05	1.79E-
04 217										

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-204 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
INGESTION OF POULTRY 05 163	1.0000		1.86E-01	1.13E-01	4.25E-01	5.38E-01	7.24E-01	7.56E-01	1.12E+00	1.28E-
INGESTION OF OTHER MEAT CROPS 05 163	1.0000		4.43E-02	3.63E-02	8.60E-02	1.02E-01	1.20E-01	1.29E-01	2.32E-01	1.28E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 85	1.0000		9.46E+01	5.86E+01	2.23E+02	2.81E+02	4.17E+02	4.90E+02	8.26E+02	4.85E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 85	1.0000		8.48E+01	4.61E+01	2.14E+02	2.66E+02	4.02E+02	4.74E+02	8.00E+02	4.85E-
TOTAL INGESTION PATHWAYS DOSE 05 159	1.0000		9.75E+00	6.11E+00	2.26E+01	2.79E+01	3.95E+01	4.54E+01	7.79E+01	2.39E-
LONG-TERM GROUNDSHINE DOSE 04 85	1.0000		7.50E+01	4.08E+01	1.84E+02	2.34E+02	3.49E+02	4.02E+02	7.07E+02	4.85E-
LONG-TERM RESUSPENSION DOSE 04 85	1.0000		9.84E+00	5.47E+00	2.43E+01	3.08E+01	4.51E+01	5.20E+01	9.26E+01	4.85E-
WATER INGESTION DOSE 04 217	1.0000		1.05E-01	8.59E-02	1.94E-01	2.35E-01	3.22E-01	3.47E-01	5.59E-01	1.64E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-208 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

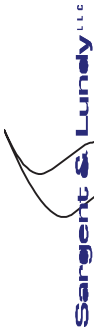
MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 18

SOURCE TERM 3 OF 6:
IC

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	1.00E-09	1.00E-09	1.00E-08
2.00E-08	1.00E+00	1.00E+00	2.00E-08
3.00E-08	1.00E+00	1.00E+00	3.00E-08
5.00E-08	1.00E+00	1.00E+00	5.00E-08
7.00E-08	1.00E+00	1.00E+00	7.00E-08
1.00E-07	1.00E+00	1.00E+00	1.00E-07
2.00E-07	1.00E+00	1.00E+00	2.00E-07
3.00E-07	1.00E+00	1.00E+00	3.00E-07
5.00E-07	1.00E+00	1.00E+00	5.00E-07
7.00E-07	1.00E+00	1.00E+00	7.00E-07
1.00E-06	1.00E+00	1.00E+00	1.00E-06
2.00E-06	1.00E+00	1.00E+00	2.00E-06
3.00E-06	1.00E+00	1.00E+00	3.00E-06
5.00E-06	1.00E+00	1.00E+00	5.00E-06
7.00E-06	1.00E+00	1.00E+00	7.00E-06
1.00E-05	1.00E+00	1.00E+00	1.00E-05
2.00E-05	1.00E+00	1.00E+00	2.00E-05
3.00E-05	1.00E+00	1.00E+00	3.00E-05
5.00E-05	1.00E+00	1.00E+00	5.00E-05
7.00E-05	1.00E+00	1.00E+00	7.00E-05
1.00E-04	1.00E+00	1.00E+00	1.00E-04
2.00E-04	1.00E+00	1.00E+00	2.00E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-219 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 175	TOT LIF 0-16.1 km	1.0000	1.99E+03	1.09E+03	4.84E+03	6.41E+03	1.30E+04	1.67E+04	3.15E+04	4.38E-
L-EDEWBODY 04 334	TOT LIF 0-80.5 km	1.0000	2.34E+04	1.42E+04	5.63E+04	6.97E+04	8.78E+04	9.69E+04	1.45E+05	1.33E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 05 211	0-80.5 km	0.0169	1.96E-10	0.00E+00	0.00E+00	0.00E+00	9.11E-10	6.63E-09	3.25E-07	4.76E-
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL 05 211	3.2-4.8 km	0.0166	1.06E-05	0.00E+00	0.00E+00	0.00E+00	6.20E-05	3.67E-04	2.26E-02	4.76E-
CAN FAT/TOTAL 04 334	0-80.5 km	1.0000	2.23E-04	1.29E-04	5.53E-04	7.03E-04	9.40E-04	1.04E-03	1.58E-03	1.33E-
CAN FAT/TOTAL 04 175	0-16.1 km	1.0000	3.40E-03	1.70E-03	8.27E-03	1.16E-02	2.45E-02	3.12E-02	5.87E-02	4.38E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 03 208	0-1.6 km	1.0000	5.90E+01	4.54E+01	1.12E+02	1.51E+02	2.94E+02	3.62E+02	4.56E+02	2.25E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-220 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = AP1000 ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

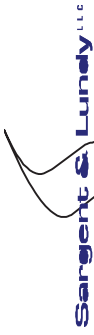
SOURCE TERM 4 OF 6:
 BP

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:34:18	PAGE 22	PROB	QUANTILES					PEAK	PEAK	
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH		
TRIAL										
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	4.93E+03	3.96E+03	9.81E+03	1.05E+04	1.19E+04	1.26E+04	2.09E+04	1.41E-
05 351										
CAN FAT/TOTAL	0-16.1 km	1.0000	9.79E+01	8.68E+01	1.71E+02	2.07E+02	2.56E+02	2.81E+02	4.27E+02	1.52E-
04 114										
POPULATION DOSE (Sv)										
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	2.16E+03	1.91E+03	3.84E+03	4.70E+03	5.81E+03	6.26E+03	9.44E+03	1.52E-
04 114										
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.12E+05	9.46E+04	2.13E+05	2.34E+05	2.94E+05	3.12E+05	4.74E+05	1.41E-
05 351										
POPULATION WEIGHTED RISK										
CAN FAT/TOTAL	0-80.5 km	1.0000	5.30E-04	4.43E-04	1.02E-03	1.08E-03	1.22E-03	1.28E-03	2.08E-03	1.41E-
05 351										
CAN FAT/TOTAL	0-16.1 km	1.0000	9.36E-04	8.04E-04	1.76E-03	2.08E-03	2.44E-03	2.62E-03	3.64E-03	2.85E-
05 23										

PEAK DOSE FOUND ON SPATIAL GRID (SV)



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-222 of 1.2-263

Client PSEG Nuclear Development	Safety Related X	Non-Safety Related
Project PSEG ESPA	Prepared by	
Proj. No 12380-001	Reviewed by	
Equip. No.	Approved by	
	Date	Date
	Date	Date
	Date	Date

INGESTION OF POULTRY 05 179	1.0000 1.19E+00 1.07E+00 1.78E+00 2.11E+00 2.78E+00 5.37E+00 9.51E-	05 261
INGESTION OF OTHER MEAT CROPS 05 261	1.0000 1.86E-01 1.56E-01 2.87E-01 3.40E-01 4.95E-01 5.75E-01 9.53E-01 8.56E-	
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km		
TOTAL LONG-TERM PATHWAYS DOSE 05 351	1.0000 1.12E+05 9.46E+04 2.13E+05 2.34E+05 2.94E+05 3.12E+05 4.74E+05 1.41E-	
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 351	1.0000 9.78E+04 8.06E+04 1.95E+05 2.12E+05 2.45E+05 2.60E+05 3.84E+05 1.41E-	
TOTAL INGESTION PATHWAYS DOSE 05 24	1.0000 1.44E+03 1.19E+03 2.16E+03 2.52E+03 3.20E+03 3.39E+03 6.30E+03 1.24E-	
LONG-TERM GROUNDSHINE DOSE 05 351	1.0000 9.69E+04 7.99E+04 1.92E+05 2.11E+05 2.43E+05 2.59E+05 3.79E+05 1.41E-	
LONG-TERM RESUSPENSION DOSE 04 3	1.0000 8.62E+02 5.93E+02 1.96E+03 2.36E+03 3.27E+03 3.57E+03 5.75E+03 1.19E-	
WATER INGESTION DOSE 05 24	1.0000 1.00E+03 8.45E+02 1.72E+03 2.13E+03 2.92E+03 3.14E+03 5.71E+03 1.24E-	



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-226 of 1.2-263

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
	Date
	Date
	Date

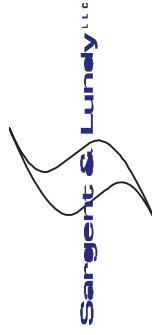
MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 24

SOURCE TERM 4 OF 6:
BP

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-05	1.00E+00	1.00E-05	1.00E-07
2.00E-05	1.00E+00	2.00E-05	2.00E-07
3.00E-05	1.00E+00	3.00E-05	3.00E-07
5.00E-05	1.00E+00	5.00E-05	5.00E-07
7.00E-05	1.00E+00	7.00E-05	7.00E-07
1.00E-04	1.00E+00	1.00E-04	1.00E-06
2.00E-04	1.00E+00	2.00E-04	2.00E-06
3.00E-04	1.00E+00	3.00E-04	3.00E-06
5.00E-04	1.00E+00	5.00E-04	5.00E-06
7.00E-04	1.00E+00	7.00E-04	7.00E-06
1.00E-03	1.00E+00	1.00E-03	1.00E-05
2.00E-03	1.00E+00	2.00E-03	2.00E-05
3.00E-03	1.00E+00	3.00E-03	3.00E-05
5.00E-03	1.00E+00	5.00E-03	5.00E-05
7.00E-03	1.00E+00	7.00E-03	7.00E-05
1.00E-02	1.00E+00	1.00E-02	1.00E-04
2.00E-02	1.00E+00	2.00E-02	2.00E-04
3.00E-02	1.00E+00	3.00E-02	3.00E-04
5.00E-02	1.00E+00	5.00E-02	5.00E-04
7.00E-02	1.00E+00	7.00E-02	7.00E-04
1.00E-01	9.96E-01	1.00E-01	1.00E-03
2.00E-01	9.82E-01	2.00E-01	2.00E-03

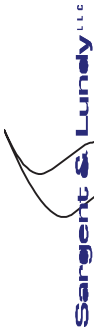


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X	Non-Safety Related		
Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

ERL FAT/TOTAL 0.00E+00 0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00				
ERL FAT/TOTAL 0.00E+00 0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00				
POPULATION EXCEEDING DOSE																						
EARLY dose	L-EDEWBODY > 2.00 Sv	0.3185	4.92E-01	0.00E+00	9.48E-01	3.17E+00	9.64E+00	1.12E+01	1.94E+01	2.81E-04	1.0	0.8831	1.29E+03	2.69E+01	3.97E+02	3.58E+03	2.96E+04	7.47E+04	8.63E+04	1.56E-03	334	
POPULATION DOSE (Sv)																						
L-EDEWBODY	TOT LIF	0-16.1 km	1.0000	9.60E+02	7.14E+02	2.15E+03	2.75E+03	5.10E+03	5.90E+03	1.08E+04	1.79E-04	217	0-80.5 km	1.0000	4.06E+04	2.19E+04	1.02E+05	1.10E+05	1.43E+05	2.28E+05	9.51E-06	172
POPULATION WEIGHTED RISK																						
ERL FAT/TOTAL 0.00E+00 0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
ERL FAT/TOTAL 0.00E+00 0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
ERL FAT/TOTAL 0.00E+00 0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
ERL FAT/TOTAL 0.00E+00 0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00			
CAN FAT/TOTAL 06 172	0-80.5 km	1.0000	2.63E-04	1.42E-04	6.86E-04	7.69E-04	9.72E-04	1.04E-03	1.70E-03	9.51E-06	172	0-16.1 km	1.0000	4.84E-04	3.19E-04	1.14E-03	2.48E-03	2.93E-03	6.73E-03	5.71E-05	181	

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY
03 175
0-1.6 km 1.0000 4.89E+00 3.73E+00 9.67E+00 1.21E+01 2.00E+01 2.93E+01 3.53E+01 4.33E-03



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-235 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 181	0-16.1 km	0.9432	7.15E+01	1.80E+01	2.10E+02	2.94E+02	5.66E+02	7.09E+02	2.22E+03	5.71E-
L-EDEWBODY TOT LIF 06 172	0-80.5 km	1.0000	1.18E+04	6.60E+03	3.09E+04	3.67E+04	5.08E+04	5.25E+04	8.54E+04	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 06 172	0-80.5 km	1.0000	1.33E-04	7.00E-05	3.41E-04	4.35E-04	6.55E-04	7.15E-04	1.08E-03	9.51E-
CAN FAT/TOTAL 05 181	0-16.1 km	0.9432	1.23E-04	2.75E-05	3.56E-04	5.57E-04	1.04E-03	1.26E-03	4.36E-03	5.71E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 03 175	0-1.6 km	1.0000	3.59E+00	2.71E+00	6.82E+00	8.99E+00	1.74E+01	2.34E+01	2.49E+01	4.33E-



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			Rev. 2	Date
Safety Related	X	Non-Safety Related	Page 1.2-236 of 1.2-263	
Client PSEG Nuclear Development		Prepared by		
Project PSEG ESPA		Reviewed by		
Proj. No 12380-001		Approved by		
Equip. No.		Date		

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = AP1000 ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 5 OF 6:
 CI

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 2 = NO EVACUATION

10-JAN-10 17:34:18	PAGE 27	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.22E+03	6.94E+02	3.10E+03	3.83E+03	5.59E+03	6.20E+03	9.14E+03	9.51E-
06 172	0-16.1 km	1.0000	1.40E+02	7.30E+01	3.42E+02	4.83E+02	1.00E+03	1.27E+03	3.19E+03	1.79E-
04 217	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL										
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.3185	9.83E+00	0.00E+00	1.91E+01	6.87E+01	1.90E+02	2.51E+02	3.87E+02	2.81E-
04 10									
EARLY dose L-EDEWBODY > 0.250 Sv	0.8831	2.69E+03	4.56E+02	5.11E+03	1.06E+04	2.97E+04	7.51E+04	8.83E+04	1.51E-
03 217									

POPULATION DOSE (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.2-237 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 04 217	0-16.1 km	1.0000	1.08E+03	5.85E+02	2.63E+03	3.64E+03	7.26E+03	9.16E+03	2.28E+04	1.79E-
L-EDEWBODY TOT LIF 06 172	0-80.5 km	1.0000	1.28E+04	7.52E+03	3.18E+04	3.80E+04	5.39E+04	5.93E+04	8.83E+04	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 06 172	0-80.5 km	1.0000	1.50E-04	8.56E-05	3.62E-04	4.64E-04	6.77E-04	7.20E-04	1.12E-03	9.51E-
CAN FAT/TOTAL 04 217	0-16.1 km	1.0000	2.30E-03	1.15E-03	5.69E-03	7.96E-03	1.50E-02	1.96E-02	5.24E-02	1.79E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 211	0-1.6 km	1.0000	2.93E+01	2.20E+01	5.47E+01	6.96E+01	1.79E+02	2.07E+02	2.35E+02	8.75E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page		1.2-238 of 1.2-263	

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = AP1000 ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

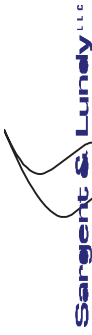
SOURCE TERM 5 OF 6:
 CI

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:34:18	PAGE 28	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.26E+03	6.36E+02	3.15E+03	3.75E+03	5.26E+03	5.67E+03	8.64E+03	1.41E-	
05 40											
CAN FAT/TOTAL	0-16.1 km	1.0000	3.73E+01	2.90E+01	7.91E+01	1.03E+02	1.90E+02	2.15E+02	4.05E+02	1.79E-	
04 217											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	8.38E+02	6.07E+02	1.83E+03	2.43E+03	4.35E+03	5.22E+03	9.67E+03	1.79E-	
04 217											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	2.88E+04	1.53E+04	7.34E+04	9.10E+04	1.12E+05	1.19E+05	1.98E+05	1.41E-	
05 40											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.29E-04	6.06E-05	3.32E-04	4.16E-04	5.56E-04	5.97E-04	8.92E-04	1.41E-	
05 40											
CAN FAT/TOTAL	0-16.1 km	1.0000	2.52E-04	1.68E-04	5.76E-04	7.68E-04	1.09E-03	1.15E-03	1.80E-03	1.90E-	
05 168											

PEAK DOSE FOUND ON SPATIAL GRID (SV)

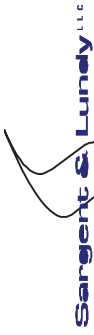


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-239 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 338	0-1.6 km	1.0000	1.96E-02	2.70E-03	1.01E-01	1.04E-01	1.13E-01	1.17E-01	1.28E-01	7.23E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 217	0-16.1 km	1.0000	8.38E+02	6.07E+02	1.83E+03	2.43E+03	4.35E+03	5.22E+03	9.67E+03	1.79E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 168		1.0000	3.63E+02	2.51E+02	8.28E+02	1.06E+03	1.73E+03	2.02E+03	2.66E+03	1.90E-
TOTAL INGESTION PATHWAYS DOSE 04 217		1.0000	1.04E+02	8.56E+01	2.02E+02	2.54E+02	3.75E+02	4.31E+02	8.31E+02	1.64E-
LONG-TERM GROUNDSHINE DOSE 05 168		1.0000	3.46E+02	2.40E+02	7.99E+02	1.03E+03	1.61E+03	1.94E+03	2.61E+03	1.90E-
LONG-TERM RESUSPENSION DOSE 05 202		1.0000	1.77E+01	1.12E+01	4.11E+01	5.48E+01	9.26E+01	1.03E+02	1.58E+02	1.45E-
WATER INGESTION DOSE 04 217		0.9873	8.19E+01	6.33E+01	1.70E+02	2.27E+02	3.53E+02	4.08E+02	7.79E+02	1.64E-
POP.-DEPENDENT DECONTAMINATION DOSE 04 217		1.0000	3.67E+02	2.01E+02	9.03E+02	1.26E+03	2.56E+03	3.15E+03	6.94E+03	1.79E-
FARM-DEPENDENT DECONTAMINATION DOSE 04 59		0.9414	2.35E+00	1.93E+00	4.69E+00	5.74E+00	9.71E+00	1.18E+01	1.94E+01	7.52E-
INGESTION OF GRAINS 05 202		1.0000	5.75E-01	5.18E-01	1.02E+00	1.14E+00	1.47E+00	1.63E+00	3.63E+00	1.33E-
INGESTION OF LEAF VEG 05 202		1.0000	6.06E+00	5.42E+00	1.06E+01	1.19E+01	1.57E+01	1.77E+01	3.82E+01	1.33E-
INGESTION OF ROOT CROPS 05 202		1.0000	3.76E+00	3.28E+00	6.73E+00	7.87E+00	1.06E+01	1.14E+01	2.41E+01	1.33E-
INGESTION OF FRUITS 05 202		1.0000	1.52E+00	1.27E+00	2.68E+00	3.15E+00	4.01E+00	4.44E+00	9.29E+00	1.11E-
INGESTION OF LEGUMES 05 202		1.0000	7.33E+00	6.62E+00	1.24E+01	1.46E+01	2.06E+01	2.19E+01	4.64E+01	1.33E-
INGESTION OF BEEF 04 285		1.0000	9.57E-01	7.94E-01	1.63E+00	2.12E+00	3.90E+00	5.14E+00	8.98E+00	5.71E-
INGESTION OF MILK 04 285		1.0000	2.04E+00	1.75E+00	3.60E+00	4.39E+00	5.99E+00	6.68E+00	1.09E+01	5.71E-



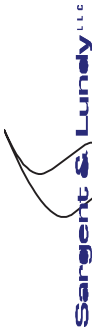
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.2-240 of 1.2-263		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 05 176	1.0000	9.49E-02	7.16E-02	1.67E-01	2.35E-01	5.93E-01	7.28E-01	2.62E+00	2.85E-
INGESTION OF OTHER MEAT CROPS 06 203	1.0000	1.85E-01	1.53E-01	3.10E-01	3.67E-01	5.43E-01	6.39E-01	1.99E+00	4.94E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 40	1.0000	2.88E+04	1.53E+04	7.34E+04	9.10E+04	1.12E+05	1.19E+05	1.98E+05	1.41E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 40	1.0000	2.40E+04	1.14E+04	6.32E+04	7.75E+04	1.03E+05	1.08E+05	1.65E+05	1.41E-
TOTAL INGESTION PATHWAYS DOSE 04 85	1.0000	5.96E+02	5.52E+02	8.83E+02	1.02E+03	1.23E+03	1.34E+03	1.84E+03	3.42E-
LONG-TERM GROUNDSHINE DOSE 05 40	1.0000	2.16E+04	1.00E+04	5.74E+04	7.28E+04	9.42E+04	1.02E+05	1.49E+05	1.41E-
LONG-TERM RESUSPENSION DOSE 05 40	1.0000	2.33E+03	1.08E+03	6.21E+03	7.73E+03	1.03E+04	1.08E+04	1.61E+04	1.41E-
WATER INGESTION DOSE 04 217	1.0000	1.97E+02	1.54E+02	3.55E+02	4.41E+02	6.31E+02	7.11E+02	1.04E+03	1.64E-



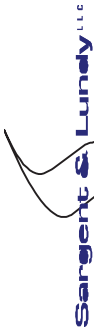
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev. 2	Date
Page 1.2-242 of 1.2-263	

Client PSEG Nuclear Development	X	Non-Safety Related	Prepared by	Date
Project PSEG ESPA			Reviewed by	Date
Proj. No 12380-001		Equip. No.	Approved by	Date

POP. -DEPENDENT DECONTAMINATION COST 04 59	1.0000	5.22E+09	3.07E+09	1.26E+10	1.70E+10	2.82E+10	3.25E+10	4.80E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	1.0000	6.79E+07	5.55E+07	1.14E+08	1.32E+08	1.87E+08	2.13E+08	3.60E+08	3.42E-
POP. -DEPENDENT INTERDICTION COST 04 59	1.0000	1.40E+10	7.73E+09	3.81E+10	5.15E+10	6.90E+10	8.25E+10	1.28E+11	4.85E-
FARM-DEPENDENT INTERDICTION COST 04 59	1.0000	1.84E+08	1.35E+08	3.56E+08	4.40E+08	5.63E+08	6.04E+08	7.88E+08	3.42E-
POP. -DEPENDENT CONDEMNATION COST 03 10	0.3466	6.46E+06	0.00E+00	1.32E+07	5.07E+07	1.10E+08	1.47E+08	2.08E+08	2.42E-
FARM-DEPENDENT CONDEMNATION COST 05 86	1.0000	2.64E+07	2.30E+07	4.33E+07	9.26E+07	1.12E+08	1.18E+08	1.83E+08	1.13E-
EMERGENCY PHASE COST 06 155	1.0000	2.51E+08	1.35E+08	6.01E+08	7.74E+08	1.06E+09	1.11E+09	1.74E+09	9.51E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 04 329	1.0000	5.05E+06	2.07E+06	1.37E+07	2.02E+07	2.35E+07	2.50E+07	3.15E+07	1.81E-
CROP DISPOSAL COST 04 59	1.0000	1.76E+08	1.43E+08	2.93E+08	3.26E+08	4.05E+08	4.44E+08	5.32E+08	2.57E-
AFFECTED AREA/POPULATION 0-80.5 km									
FARM DECONTAMINATION (HECTARES) 04 59	1.0000	4.13E+04	3.43E+04	7.41E+04	8.28E+04	1.09E+05	1.24E+05	2.14E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	1.0000	5.45E+05	3.01E+05	1.47E+06	2.04E+06	2.59E+06	2.87E+06	5.21E+06	4.85E-
FARM INTERDICTION (HECTARES) 04 329	1.0000	7.34E+04	6.02E+04	1.34E+05	1.67E+05	2.09E+05	2.15E+05	2.43E+05	2.19E-
POP. INTERDICTION (INDIVIDUALS) 04 59	1.0000	5.45E+05	3.01E+05	1.47E+06	2.04E+06	2.59E+06	2.87E+06	5.21E+06	4.85E-
FARM CONDEMNATION (HECTARES) 05 86	1.0000	1.68E+03	1.28E+03	2.84E+03	5.62E+03	7.61E+03	8.05E+03	1.34E+04	1.13E-
POP. CONDEMNATION (INDIVIDUALS) 03 10	0.3466	2.22E+01	0.00E+00	5.91E+01	1.31E+02	3.69E+02	4.95E+02	6.63E+02	2.42E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No.	2009-11222	
Rev.	2	Date
Page	1.2-244 of 1.2-263	

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 30

SOURCE TERM 5 OF 6:
CI

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	PROB>=X	PROB>=X	PROB>=X
1.00E-06	1.00E+00	1.00E-05	1.00E-09
2.00E-06	1.00E+00	2.00E-05	2.00E-09
3.00E-06	1.00E+00	3.00E-05	3.00E-09
5.00E-06	1.00E+00	5.00E-05	5.00E-09
7.00E-06	1.00E+00	7.00E-05	7.00E-09
1.00E-05	1.00E+00	1.00E-04	1.00E-08
2.00E-05	1.00E+00	2.00E-04	2.00E-08
3.00E-05	1.00E+00	3.00E-04	3.00E-08
5.00E-05	1.00E+00	5.00E-04	5.00E-08
7.00E-05	1.00E+00	7.00E-04	7.00E-08
1.00E-04	1.00E+00	1.00E-03	1.00E-07
2.00E-04	1.00E+00	2.00E-03	2.00E-07
3.00E-04	1.00E+00	3.00E-03	3.00E-07
5.00E-04	1.00E+00	5.00E-03	5.00E-07
7.00E-04	1.00E+00	7.00E-03	7.00E-07
1.00E-03	1.00E+00	1.00E-02	1.00E-06
2.00E-03	1.00E+00	2.00E-02	2.00E-06
3.00E-03	1.00E+00	3.00E-02	3.00E-06
5.00E-03	1.00E+00	5.00E-02	5.00E-06
7.00E-03	1.00E+00	7.00E-02	7.00E-06
1.00E-02	1.00E+00	1.00E-01	1.00E-05
2.00E-02	1.00E+00	2.00E-01	2.00E-05
		9.96E-01	



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related		
Client PSEG Nuclear Development		Prepared by		
Project PSEG ESPA		Reviewed by		
Proj. No 12380-001		Approved by		
Equip. No.		Date		

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = AP1000 ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 6 OF 6:
 CFL

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

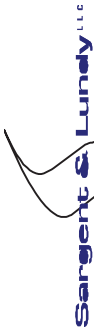
COHORT 1 = 95% EVACUATION

10-JAN-10 17:34:18	PAGE 32	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	7.47E+00	1.55E+00	2.07E+01	4.12E+01	8.40E+01	1.04E+02	2.62E+02	2.00E-
04 175	0-16.1 km	0.9544	5.93E-03	1.58E-03	1.57E-02	2.51E-02	5.42E-02	6.64E-02	2.02E-01	1.90E-
05 356	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										
EARLY dose L-EDEWBODY > 0.250 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										

POPULATION DOSE (Sv)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-255 of 1.2-263

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 158	0-16.1 km	1.0000	2.95E+00	1.70E+00	7.01E+00	9.65E+00	1.75E+01	2.10E+01	3.68E+01	2.06E-
L-EDEWBODY TOT LIF 04 175	0-80.5 km	1.0000	2.05E+02	3.90E+01	5.74E+02	1.12E+03	2.36E+03	2.93E+03	7.31E+03	2.00E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 175	0-80.5 km	1.0000	9.33E-07	2.19E-07	2.57E-06	5.19E-06	1.03E-05	1.24E-05	3.22E-05	2.00E-
CAN FAT/TOTAL 04 345	0-16.1 km	1.0000	2.20E-06	1.30E-06	5.15E-06	7.21E-06	1.15E-05	1.28E-05	2.57E-05	2.09E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 03 355	0-1.6 km	1.0000	2.60E-02	2.13E-02	4.87E-02	6.03E-02	8.41E-02	9.43E-02	1.33E-01	3.11E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page		1.2-256 of 1.2-263	

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = AP1000 ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

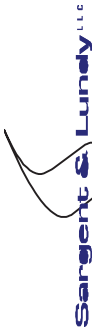
SOURCE TERM 6 OF 6:
 CFL

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:34:18	PAGE 34	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	2.20E+03	1.65E+03	4.55E+03	5.43E+03	7.17E+03	7.80E+03	7.80E+03	1.11E+04	4.85E-
04 85											
CAN FAT/TOTAL	0-16.1 km	1.0000	1.15E+02	8.53E+01	2.39E+02	3.08E+02	5.24E+02	6.33E+02	6.33E+02	1.26E+03	1.24E-
05 367											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	2.75E+03	2.06E+03	5.74E+03	7.34E+03	1.22E+04	1.45E+04	1.45E+04	2.90E+04	1.24E-
05 367											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	5.88E+04	4.56E+04	1.15E+05	1.32E+05	1.81E+05	2.05E+05	2.05E+05	2.88E+05	4.85E-
04 85											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.36E-04	1.01E-04	3.05E-04	3.21E-04	3.60E-04	3.78E-04	3.78E-04	5.12E-04	1.33E-
05 202											
CAN FAT/TOTAL	0-16.1 km	1.0000	1.82E-04	1.40E-04	3.48E-04	4.18E-04	5.18E-04	5.32E-04	5.32E-04	6.87E-04	5.74E-
06 213											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



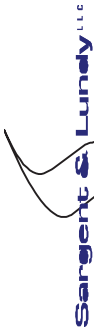
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.2-257 of 1.2-263	

Client	PSEG Nuclear Development	Prepared by	
Project	PSEG ESPA	Reviewed by	
Proj. No	12380-001	Approved by	

	Safety Related	X	Non-Safety Related						
L-EDEWBODY 04 352	0-1.6 km	1.0000	4.20E-02	3.42E-02	4.64E-02	5.01E-02	5.08E-02	5.18E-02	2.57E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 367	0-16.1 km	1.0000	2.75E+03	2.06E+03	5.74E+03	7.34E+03	1.22E+04	1.45E+04	2.90E+04
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 41		1.0000	3.84E+02	3.21E+02	7.90E+02	9.65E+02	1.08E+03	1.12E+03	1.49E+03
TOTAL INGESTION PATHWAYS DOSE 05 26		1.0000	3.26E+01	3.11E+01	5.15E+01	5.56E+01	6.63E+01	7.07E+01	9.27E+01
LONG-TERM GROUNDSHINE DOSE 04 365		1.0000	5.86E+01	4.76E+01	1.11E+02	1.35E+02	2.09E+02	2.42E+02	3.67E+02
LONG-TERM RESUSPENSION DOSE 04 59		1.0000	3.25E+02	2.71E+02	7.13E+02	8.00E+02	1.03E+03	1.11E+03	1.37E+03
WATER INGESTION DOSE 04 217		1.0000	7.37E+00	6.27E+00	1.35E+01	1.70E+01	2.46E+01	2.79E+01	4.89E+01
POP.-DEPENDENT DECONTAMINATION DOSE 05 367		1.0000	2.22E+03	1.48E+03	4.83E+03	6.60E+03	1.07E+04	1.25E+04	2.81E+04
FARM-DEPENDENT DECONTAMINATION DOSE 06 164		1.0000	1.15E+02	1.05E+02	1.90E+02	2.14E+02	2.63E+02	2.87E+02	4.12E+02
INGESTION OF GRAINS 05 6		1.0000	8.16E-01	7.21E-01	1.29E+00	1.50E+00	2.04E+00	2.12E+00	2.91E+00
INGESTION OF LEAF VEG 05 42		1.0000	7.39E+00	6.87E+00	1.09E+01	1.18E+01	1.41E+01	1.52E+01	2.40E+01
INGESTION OF ROOT CROPS 05 237		1.0000	3.91E+00	3.53E+00	6.06E+00	7.01E+00	8.24E+00	8.83E+00	1.13E+01
INGESTION OF FRUITS 05 6		1.0000	1.71E+00	1.44E+00	3.02E+00	3.25E+00	3.86E+00	4.15E+00	5.89E+00
INGESTION OF LEGUMES 05 237		1.0000	6.82E+00	6.52E+00	1.04E+01	1.10E+01	1.26E+01	1.33E+01	2.09E+01
INGESTION OF BEEF 06 337		1.0000	8.38E-01	6.01E-01	1.68E+00	2.14E+00	2.94E+00	3.08E+00	4.20E+00
INGESTION OF MILK 05 26		1.0000	3.37E+00	2.91E+00	6.02E+00	7.20E+00	9.01E+00	9.92E+00	1.42E+01



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-258 of 1.2-263

Client	PSEG Nuclear Development		Safety Related	X	Non-Safety Related	Prepared by	Date
Project	PSEG ESPA					Reviewed by	Date
Proj. No	12380-001		Equip. No.			Approved by	Date

INGESTION OF POULTRY 06 130	1.0000	1.58E-01	1.11E-01	3.38E-01	4.21E-01	5.86E-01	6.50E-01	9.01E-01	9.51E-
INGESTION OF OTHER MEAT CROPS 05 309	1.0000	2.15E-01	2.04E-01	3.17E-01	3.48E-01	4.32E-01	4.75E-01	6.82E-01	4.92E-
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km TOTAL LONG-TERM PATHWAYS DOSE 04 85	1.0000	5.88E+04	4.56E+04	1.15E+05	1.32E+05	1.81E+05	2.05E+05	2.88E+05	4.85E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 302	1.0000	3.37E+04	2.42E+04	7.40E+04	8.21E+04	1.01E+05	1.04E+05	1.24E+05	3.58E-
TOTAL INGESTION PATHWAYS DOSE 04 59	1.0000	2.17E+02	1.82E+02	3.96E+02	4.84E+02	6.07E+02	6.65E+02	8.53E+02	3.42E-
LONG-TERM GROUNDSHINE DOSE 05 202	1.0000	1.03E+04	7.13E+03	2.22E+04	2.53E+04	3.11E+04	3.22E+04	4.33E+04	1.33E-
LONG-TERM RESUSPENSION DOSE 05 40	1.0000	2.35E+04	1.72E+04	5.17E+04	5.74E+04	7.08E+04	7.28E+04	9.16E+04	1.41E-
WATER INGESTION DOSE 04 217	1.0000	1.73E+01	1.42E+01	2.80E+01	3.26E+01	4.35E+01	4.93E+01	6.79E+01	1.64E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.2-262 of 1.2-263

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date

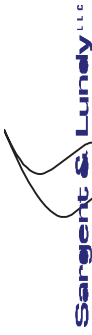
MACCS2 10-JAN-10 17:34:18 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 36

SOURCE TERM 6 OF 6:
CFL

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	PROB>=X	X	PROB>=X
1.00E-08	1.00E+00	1.00E-08	1.00E+00
2.00E-08	1.00E+00	2.00E-08	1.00E+00
3.00E-08	1.00E+00	3.00E-08	1.00E+00
5.00E-08	1.00E+00	5.00E-08	1.00E+00
7.00E-08	1.00E+00	7.00E-08	1.00E+00
1.00E-07	1.00E+00	1.00E-07	1.00E+00
2.00E-07	1.00E+00	2.00E-07	1.00E+00
3.00E-07	1.00E+00	3.00E-07	1.00E+00
5.00E-07	1.00E+00	5.00E-07	1.00E+00
7.00E-07	1.00E+00	7.00E-07	1.00E+00
1.00E-06	1.00E+00	1.00E-06	1.00E+00
2.00E-06	1.00E+00	2.00E-06	1.00E+00
3.00E-06	1.00E+00	3.00E-06	1.00E+00
5.00E-06	1.00E+00	5.00E-06	1.00E+00
7.00E-06	1.00E+00	7.00E-06	1.00E+00
1.00E-05	1.00E+00	1.00E-05	1.00E+00
2.00E-05	1.00E+00	2.00E-05	1.00E+00
3.00E-05	1.00E+00	3.00E-05	1.00E+00
5.00E-05	1.00E+00	5.00E-05	1.00E+00
7.00E-05	1.00E+00	7.00E-05	1.00E+00
1.00E-04	1.00E+00	1.00E-04	1.00E+00
2.00E-04	1.00E+00	2.00E-04	1.00E+00



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.2-263 of 1.2-263

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Reviewed by	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

3.00E-04	1.00E+00	3.00E-04	9.47E-01	3.00E-04	1.00E+00	3.00E-04	1.00E+00	3.00E-04	1.00E+00
5.00E-04	1.00E+00	5.00E-04	9.01E-01	5.00E-04	1.00E+00	5.00E-04	1.00E+00	5.00E-04	1.00E+00
7.00E-04	1.00E+00	7.00E-04	8.72E-01	7.00E-04	1.00E+00	7.00E-04	1.00E+00	7.00E-04	1.00E+00
1.00E-03	1.00E+00	1.00E-03	8.13E-01	1.00E-03	1.00E+00	1.00E-03	1.00E+00	1.00E-03	1.00E+00
2.00E-03	1.00E+00	2.00E-03	5.86E-01	2.00E-03	1.00E+00	2.00E-03	1.00E+00	2.00E-03	1.00E+00
3.00E-03	1.00E+00	3.00E-03	3.90E-01	3.00E-03	1.00E+00	3.00E-03	1.00E+00	3.00E-03	1.00E+00
5.00E-03	1.00E+00	5.00E-03	1.63E-01	5.00E-03	1.00E+00	5.00E-03	1.00E+00	5.00E-03	1.00E+00
7.00E-03	1.00E+00	7.00E-03	5.38E-02	7.00E-03	9.86E-01	7.00E-03	1.00E+00	7.00E-03	1.00E+00
1.00E-02	1.00E+00	1.00E-02	1.26E-02	1.00E-02	8.64E-01	1.00E-02	1.00E+00	1.00E-02	1.00E+00
2.00E-02	1.00E+00	1.46E-02	3.17E-03	2.00E-02	5.44E-01	2.00E-02	1.00E+00	2.00E-02	1.00E+00
3.00E-02	1.00E+00	N.D.	N.D.	3.00E-02	3.22E-01	3.00E-02	1.00E+00	3.00E-02	1.00E+00
5.00E-02	2.43E-01	N.D.	N.D.	5.00E-02	9.38E-02	5.00E-02	6.71E-02	5.00E-02	6.71E-02
6.94E-02	3.17E-03	N.D.	N.D.	7.00E-02	3.04E-02	5.18E-02	2.57E-04	5.18E-02	2.57E-04
N.D.	N.D.	N.D.	N.D.	1.00E-01	3.51E-03	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	1.33E-01	3.11E-03	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Successful completion of MACCS2 was achieved!
 This job required a total of 63.188 CPU seconds

Input processing required 0.027 CPU seconds
 Simulation required 62.391 CPU seconds
 Output processing required 0.770 CPU seconds



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	1.3-1	of 1.3-265

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT I.3
MACCS2 Output File Data (US-ABWR)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden
P1: ATMOS USER INPUT (UNIT 24) = G.INP
P2: EARLY USER INPUT (UNIT 25) = E.2.INP
P3: CHRONC USER INPUT (UNIT 26) = E.3.INP
P4: METEOROLOGY DATA (UNIT 28) = C.INP
P5: SITE DATA INPUT (UNIT 29) = D.INP
P6: LIST OUTPUT (UNIT 06) = I.3.OUT

USER INPUT IS READ FROM UNIT 24
RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.
THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

RECORD
NUMBER

```

*****
* FILE NAME: G.INP
*
* Sargent & Lundy (10/2009)
*
* Run Identification (RI) Data
*****
*
* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT
*
1 RIATNAM1001 'US-APWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS'
*
* GEOMETRY (GE) DATA
*****
*

```




Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-3 of 1.3-265

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.
Prepared by		Date
Reviewed by		Date
Approved by		Date

```

* NUMBER OF RADIAL SPATIAL ELEMENTS
*
2  GENUMRAD001  10
*
* SPATIAL ENDPOINT DISTANCES IN MILES (MATCHES SITE FILE)
*
*   END001      1      2      3      4      5
*   END002     10     20     30     40     50
*
* SPATIAL ENDPOINT DISTANCES IN KILOMETERS
*
3  GESPAEND001  1.61   3.22   4.83   6.44   8.05
4  GESPAEND002  16.1   32.2   48.3   64.4   80.5
*
*****
* NUCLIDE DATA
*****
*
* NUMBER OF PSEUDO-STABLE NUCLIDES DEFINED IN THE MODEL
* (USED TO TRUNCATE THE DECAY CHAINS) - USER'S GUIDE PG.C-1
*
5  ISNUMSTB001  27
*
* LIST OF PSEUDO-STABLE NUCLIDES
*
6  ISNAMSTB001  I-129   (daughter of Te-129 and Te-129m)
7  ISNAMSTB002  Xe-131m (daughter of I-131)
8  ISNAMSTB003  Xe-133m (daughter of I-133)
9  ISNAMSTB004  Xe-135m (daughter of I-135)
10 ISNAMSTB005  Cs-135  (daughter of Xe-135 and Xe-135m)
11 ISNAMSTB006  Sm-147  (daughter of Pm-147)
12 ISNAMSTB007  U-234   (daughter of Pu-238)
13 ISNAMSTB008  U-235   (daughter of Pu-239)
14 ISNAMSTB009  U-236   (daughter of Pu-240)
15 ISNAMSTB010  U-237   (daughter of Pu-241)

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-4 of 1.3-265

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

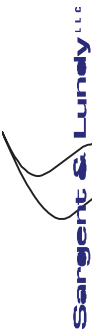
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

16	ISNAMSTB011	Np-237	(daughter of Am-241)
17	ISNAMSTB012	Rb-87	(daughter of Kr-87)
18	ISNAMSTB013	Ba-137m	(daughter of Cs-137)
19	ISNAMSTB014	Rb-88	(daughter of Kr-88)
20	ISNAMSTB015	Y-91m	(daughter of Sr-91)
21	ISNAMSTB016	Zr-93	(daughter of Y-93)
22	ISNAMSTB017	Nb-93m	(daughter of Zr-93)
23	ISNAMSTB018	Nb-95m	(daughter of Zr-95)
24	ISNAMSTB019	Nb-97	(daughter of Zr-97 and Nb-97m)
25	ISNAMSTB020	Nb-97m	(daughter of Zr-97)
26	ISNAMSTB021	Tc-99	(daughter of Mo-99)
27	ISNAMSTB022	Rh-103m	(daughter of Ru-103)
28	ISNAMSTB023	Rh-106	(daughter of Ru-106)
29	ISNAMSTB024	Te-131	(daughter of Te-131m)
30	ISNAMSTB025	Pr-144	(daughter of Ce-144 and Pr-144m)
31	ISNAMSTB026	Pr-144m	(daughter of Ce-144)
32	ISNAMSTB027	Pm-147	(daughter of Nd-147)

* NUMBER OF RADIOACTIVE NUCLIDES DEFINED IN THE MODEL
 * NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

33 ISNUMISO001 60
 *
 * NUMBER OF CHEMICAL ELEMENT GROUPS DEFINED IN THE MODEL
 * NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

- 34 ISMAXGRP001 9
 *
 * GROUP 1 - NOBLE GASES
 * GROUP 2 - IODINE
 * GROUP 3 - CESIUM, RUBIDIUM
 * GROUP 4 - TELLURIUM GROUP
 * GROUP 5 - STRONTIUM
 * GROUP 6 - MOLYBDENUM, COBALT, RUTHENIUM, TECHNETIUM
 * GROUP 7 - LANTHANUM, YTTRIUM, NEODYMIUM, PROMETHIUM, AMERICIUM, CURIUM



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-5 of 1.3-265

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

* GROUP 8 - CERIUM, ACTINIDES (PLUTONIUM, NEPTUNIUM)
 * GROUP 9 - BARIUM
 *
 * WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP
 * ALL NUCLIDE GROUPS EXCEPT NOBLE GAS ARE ASSUMED SUBJECT
 * TO BOTH WET AND DRY DEPOSITION.
 * USER'S GUIDE APPENDIX C

	WETDEP	DRYDEP
35	ISDEPFLA001	.FALSE.
36	ISDEPFLA002	.TRUE.
37	ISDEPFLA003	.TRUE.
38	ISDEPFLA004	.TRUE.
39	ISDEPFLA005	.TRUE.
40	ISDEPFLA006	.TRUE.
41	ISDEPFLA007	.TRUE.
42	ISDEPFLA008	.TRUE.
43	ISDEPFLA009	.TRUE.

* CHEMICAL ELEMENT GROUP ASSIGNMENT
 * USER'S GUIDE APPENDIX C

	NUCNAM	IGROUP
44	ISOTPGRP001	Co-58
45	ISOTPGRP002	Co-60
46	ISOTPGRP003	Kr-85
47	ISOTPGRP004	Kr-85m
48	ISOTPGRP005	Kr-87
49	ISOTPGRP006	Kr-88
50	ISOTPGRP007	Rb-86
51	ISOTPGRP008	Sr-89
52	ISOTPGRP009	Sr-90
53	ISOTPGRP010	Sr-91



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-6 of 1.3-265

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related	
54	ISOTTPGRP011		Sr-92	5
55	ISOTTPGRP012		Y-90	7
56	ISOTTPGRP013		Y-91	7
57	ISOTTPGRP014		Y-92	7
58	ISOTTPGRP015		Y-93	7
59	ISOTTPGRP016		Zr-95	7
60	ISOTTPGRP017		Zr-97	7
61	ISOTTPGRP018		Nb-95	7
62	ISOTTPGRP019		Mo-99	6
63	ISOTTPGRP020		Tc-99m	6
64	ISOTTPGRP021		Ru-103	6
65	ISOTTPGRP022		Ru-105	6
66	ISOTTPGRP023		Ru-106	6
67	ISOTTPGRP024		Rh-105	6
68	ISOTTPGRP025		Sb-127	4
69	ISOTTPGRP026		Sb-129	4
70	ISOTTPGRP027		Te-127	4
71	ISOTTPGRP028		Te-127m	4
72	ISOTTPGRP029		Te-129	4
73	ISOTTPGRP030		Te-129m	4
74	ISOTTPGRP031		Te-131m	4
75	ISOTTPGRP032		Te-132	4
76	ISOTTPGRP033		I-131	2
77	ISOTTPGRP034		I-132	2
78	ISOTTPGRP035		I-133	2
79	ISOTTPGRP036		I-134	2
80	ISOTTPGRP037		I-135	2
81	ISOTTPGRP038		Xe-133	1
82	ISOTTPGRP039		Xe-135	1
83	ISOTTPGRP040		Cs-134	3
84	ISOTTPGRP041		Cs-136	3
85	ISOTTPGRP042		Cs-137	3
86	ISOTTPGRP043		Ba-139	9
87	ISOTTPGRP044		Ba-140	9
88	ISOTTPGRP045		La-140	7



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

89	ISOTPGRP046	Ia-141	7	Prepared by	Date
90	ISOTPGRP047	Ia-142	7	Reviewed by	Date
91	ISOTPGRP048	Ce-141	8	Approved by	Date
92	ISOTPGRP049	Ce-143	8		
93	ISOTPGRP050	Ce-144	8		
94	ISOTPGRP051	Pr-143	7		
95	ISOTPGRP052	Nd-147	7		
96	ISOTPGRP053	Np-239	8		
97	ISOTPGRP054	Pu-238	8		
98	ISOTPGRP055	Pu-239	8		
99	ISOTPGRP056	Pu-240	8		
100	ISOTPGRP057	Pu-241	8		
101	ISOTPGRP058	Am-241	7		
102	ISOTPGRP059	Cm-242	7		
103	ISOTPGRP060	Cm-244	7		

 * WET DEPOSITION (WD) DATA

 *
 * WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR
 *
 104 WDCWASH1001 9.5E-5 *NUREG/CR-4551 PART 7, TABLE 2.9
 *
 * WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR
 *
 105 WDCWASH2001 0.8 *NUREG/CR-4551 PART 7, TABLE 2.9
 *

 * DRY DEPOSITION (DD) DATA

 *
 * NUMBER OF PARTICLE SIZE GROUPS
 *
 106 DDNPSGRP001 1 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.3-8 of 1.3-265	
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*
* DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
*
107 DDVDEPOS001 0.01 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
*
*****
* DISPERSION PARAMETER (DP) DATA
*****
*
* # OF DISTANCES IN PLUME-SIZE TABLES--WHICH CAN BE USED AS AN ALTERNATIVE TO
* THE POWER-LAW MODEL: (TO UTILIZE THE POWER-LAW MODEL, SET NUM_DIST TO ZERO
* OR DELETE THE FOLLOWING DATA CARD)
*
108 NUM_DIST001 0
*
* POWER-LAW FUNCTION IS OF FORM: SIGMA = A * X ** B
*
* TADMOR ND GUR PARAMETRIZATION FOR DISTANCE RANGE 0.5 to 5.0 KM
* (NUREG/CR-4551 PART 7 TABLE 2.4)
*
* P-G CLASS: A B C D E F
109 DPCYSIGA001 0.3658 0.2751 0.2089 0.1474 0.1046 0.0722
110 DPCYSIGB001 0.9031 0.9031 0.9031 0.9031 0.9031 0.9031
111 DPCZSIGA001 2.5E-4 1.9E-3 0.2 0.3 0.4 0.2
112 DPCZSIGB001 2.125 1.6021 0.8543 0.6532 0.6021 0.6020
*
* LINEAR SCALING FACTOR FOR SIGMA-Y FUNCTION, NORMALLY 1
*
113 DPYSCALE001 1.0
*
* LINEAR SCALING FACTOR FOR SIGMA-Z FUNCTION,
* NORMALLY USED FOR SURFACE ROUGHNESS LENGTH CORRECTION.
* (Z1 / Z0) ** 0.2, FROM CRAC2 WE HAVE (10 CM / 3 CM) ** 0.2 = 1.27
* SEE NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
114 DPZSCALE001 1.27

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.3-9 of 1.3-265
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

* * REF/BASIS:
*
* * MACCS COMPUTES SIGMA-Y AND SIGMA-Z AS FOLLOWS:
*
* * SIGMA-Y = A * X ** B
* *
* * SIGMA-Z = C * X ** D
* *
* * THE SIGMA-Y COEFFICIENTS (A AND B) AND SIGMA-Z COEFFICIENTS (C AND D)
* * ARE TAKEN FROM NUREG-4551, VOL. 2, REV. 1, PART 7, SECTION 2.4.
* *
* * NO SIGMA-Y SCALING IS REQUIRED/USED.
* *
* * SIGMA-Z SCALING VALUE CONSISTENT WITH SAMPLE PROBLEMS IN
* * NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
* *
* * PLUME MEANDER EXPANSION FACTOR DATA
* *
* * TIME BASE FOR EXPANSION FACTOR (SECONDS)
* *
115 PMTIMBAS001 600.0 * 10 MINUTES
* *
* * BREAK POINT FOR FORMULA CHANGE (SECONDS)
* *
116 PMBRKPNT001 3600.0 * 1 HOUR
* *
* * EXPONENTIAL EXPANSION FACTOR NUMBER 1
* *
117 PMXPFAC1001 0.2
* *
* * EXPONENTIAL EXPANSION FACTOR NUMBER 2
* *

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.3-10 of 1.3-265
Non-Safety Related		Prepared by	Date
Client	PSEG Nuclear Development	Reviewed by	Date
Project	PSEG ESPA	Approved by	Date
Proj. No	12380-001	Equip. No.	

118 PMXPFAC2001 0.25

* REF/BASIS:

* ABOVE VALUES CONSISTENT WITH SECTION 2.3.2 FROM NUREG/CR-4551.

 * PLUME RISE DATA

* THE FOLLOWING SCALING FACTORS COULD BE USED TO MODIFY THE MACCS METHOD OF
 * PERFORMING PLUME RISE CALCS (IF DIFFERENT THAN 1).

* SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A BOUYANT PLUME
 * (USED BY FUNCTION CAUGHT)

119 PRSCLCRW001 1.0

* SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
 * (USED BY FUNCTION PLMRIS)

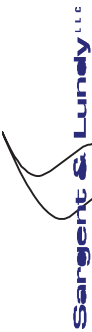
120 PRSCLADP001 1.0

* SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
 * (USED BY FUNCTION PLMRIS)

121 PRSCLEFP001 1.0

* REF/BASIS:

* THE SCALING FACTORS CAN BE USED TO MODIFY THE RESULTS OF THE HARD-WIRED
 * PLUME RISE CALCULATIONS PERFORMED BY MACCS. THIS FUNCTIONALITY IS NOT UTILIZED
 * IN THIS ANALYSIS (SCALING FACTORS SET TO 1).



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-11	of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date
Equip. No.		

 * WAKE EFFECTS DATA

* DETERMINATION OF WAKE EFFECTS HAS BEEN REVISED FOR MACCS2. THE WIDTH VARIABLE
 * IS NO LONGER INCLUDED. ADDITIONALLY, VALUES MUST BE INCLUDED FOR EACH PLUME.

* VENDOR DATA (ATTACHMENT A.3):
 * BUILDING WIDTH = 48.1 m
 * BUILDING HEIGHT = 64.7 m

* INITIAL VALUE FOR SIGMA-Y FOR EACH PLUME (4)

122 * SIGYINIT001 11.2 11.2 11.2 11.2 *INITIAL SIGMA-Y = W/4.3 = 48.1/4.3 = 11.2

* INITIAL VALUE FOR SIGMA-Z FOR EACH PLUME (4)

123 * SIGZINIT001 30.1 30.1 30.1 30.1 *INITIAL SIGMA-Z = H/2.15 = 64.7/2.15 = 30.1

* BUILDING HEIGHT (METERS)

124 * WEBUILDH001 64.7 64.7 64.7 64.7

 * RELEASE DATA (1/2, SEE END OF FILE SECOND PORTION)

* PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP
 * UNIFORM SIZE DISTRIBUTION IS ASSUMED FOR ALL 9 CHEMICAL GROUPS

125	RDPDIST001	1.0
126	RDPDIST002	1.0
127	RDPDIST003	1.0
128	RDPDIST004	1.0
129	RDPDIST005	1.0



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-12 of 1.3-265

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

- 130 RDPSDIST006 1.0
- 131 RDPSDIST007 1.0
- 132 RDPSDIST008 1.0
- 133 RDPSDIST009 1.0

*

* US - APWR CORE INVENTORY BASED ON VENDOR DATA (ATTACHMENT A.3)

* NUCNAM

CORINV (Bq)

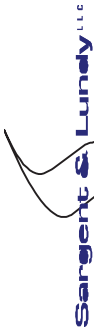
* THE INVENTORY AS GIVEN BELOW IS IN UNITS OF Ci, IT NEEDS TO BE IN UNITS OF Bq

* VARIABLE RDCORSCA001 IS SET TO 3.7E+10 FOR THE NECESSARY UNIT CONVERSION (Ci to Bq)

* SEE USER'S GUIDE PG. 5-28

*

- 134 RDCORINV001 Co-58 0.00E+00
- 135 RDCORINV002 Co-60 4.26E+05
- 136 RDCORINV003 Kr-85 1.70E+06
- 137 RDCORINV004 Kr-85m 3.04E+07
- 138 RDCORINV005 Kr-87 5.79E+07
- 139 RDCORINV006 Kr-88 8.14E+07
- 140 RDCORINV007 Rb-86 3.33E+05
- 141 RDCORINV008 Sr-89 1.11E+08
- 142 RDCORINV009 Sr-90 1.36E+07
- 143 RDCORINV010 Sr-91 1.38E+08
- 144 RDCORINV011 Sr-92 1.50E+08
- 145 RDCORINV012 Y-90 1.44E+07
- 146 RDCORINV013 Y-91 1.44E+08
- 147 RDCORINV014 Y-92 1.51E+08
- 148 RDCORINV015 Y-93 1.76E+08
- 149 RDCORINV016 Zr-95 2.07E+08
- 150 RDCORINV017 Zr-97 2.10E+08
- 151 RDCORINV018 Nb-95 2.09E+08
- 152 RDCORINV019 Mo-99 2.27E+08
- 153 RDCORINV020 Tc-99m 1.99E+08
- 154 RDCORINV021 Ru-103 1.90E+08
- 155 RDCORINV022 Ru-105 1.32E+08
- 156 RDCORINV023 Ru-106 7.38E+07
- 157 RDCORINV024 Rh-105 1.23E+08



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-13	of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

158	RDCORINV025	Sb-127	1.34E+07
159	RDCORINV026	Sb-129	3.95E+07
160	RDCORINV027	Te-127	1.33E+07
161	RDCORINV028	Te-127m	1.77E+06
162	RDCORINV029	Te-129	3.89E+07
163	RDCORINV030	Te-129m	5.80E+06
164	RDCORINV031	Te-131m	1.76E+07
165	RDCORINV032	Te-132	1.71E+08
166	RDCORINV033	I-131	1.21E+08
167	RDCORINV034	I-132	1.74E+08
168	RDCORINV035	I-133	2.43E+08
169	RDCORINV036	I-134	2.66E+08
170	RDCORINV037	I-135	2.27E+08
171	RDCORINV038	Xe-133	2.44E+08
172	RDCORINV039	Xe-135	6.89E+07
173	RDCORINV040	Cs-134	3.32E+07
174	RDCORINV041	Cs-136	9.05E+06
175	RDCORINV042	Cs-137	1.89E+07
176	RDCORINV043	Ba-139	2.16E+08
177	RDCORINV044	Ba-140	2.09E+08
178	RDCORINV045	La-140	2.18E+08
179	RDCORINV046	La-141	1.97E+08
180	RDCORINV047	La-142	1.90E+08
181	RDCORINV048	Ce-141	1.99E+08
182	RDCORINV049	Ce-143	1.82E+08
183	RDCORINV050	Ce-144	1.61E+08
184	RDCORINV051	Pr-143	1.79E+08
185	RDCORINV052	Nd-147	7.97E+07
186	RDCORINV053	Np-239	2.54E+09
187	RDCORINV054	Pu-238	7.32E+05
188	RDCORINV055	Pu-239	5.53E+04
189	RDCORINV056	Pu-240	8.67E+04
190	RDCORINV057	Pu-241	1.92E+07
191	RDCORINV058	Am-241	2.59E+04
192	RDCORINV059	Cm-242	6.42E+06



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

193 RDCORINV060 Cm-244 7.80E+05
*
* SCALING FACTOR TO ADJUST THE CORE INVENTORY
*
194 RDCORSCA001 3.7E+10 *SCALING FACTOR FOR CORE INVENTORY (Ci to Bq)
*
* DAUGHTER INGROWTH PRODUCTS RELEASED IN THE SAME PROPORTION AS THE PARENT
*
195 RDAPLFR001 PARENT
*
*****
* OUTPUT CONTROL DATA
*****
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
*
196 OCENDAT1001 .FALSE. *SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC)
*
197 OCIDEBUG001 0 *0 SKIPS DEBUG PRINTING
*
198 TYPE0NUMBER 0 *VALUE = 0 = NO ATMOSPHERIC (TYPE 0) RESULTS PRINTED
*
*****
* METEOROLOGICAL SAMPLING DATA
*****
* METEOROLOGICAL SAMPLING OPTION CODE:
*
* METCOD = 1, USER SPECIFIED DAY AND HOUR IN THE YEAR (FROM MET FILE),
* 2, WEATHER CATEGORY BIN SAMPLING,
* 3, 120 HOURS OF WEATHER SPECIFIED ON THE ATMOS USER INPUT FILE,
* 4, CONSTANT MET (BOUNDARY WEATHER USED FROM THE START),
* 5, STRATIFIED RANDOM SAMPLES FOR EACH DAY OF THE YEAR.
*****
* METEOROLOGICAL SAMPLING (M1) DATA
*****
*****
199 M1METCOD001 2 * MET FILE PROVIDED IN ATTACHMENT C

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No.	2009-11222		
Rev.	2	Date	
Page	1.3-15	of	1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

*
* LAST SPATIAL INTERVAL FOR MEASURED WEATHER
*
* *****
* BOUNDARY WEATHER (M2) DATA
* *****
200 M2LIMSPA001 10 * INTERVAL 10 = 50 MILES
*
* BOUNDARY WEATHER MIXING LAYER HEIGHT
*
201 M2BNDMXH001 1000.0 * METERS, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER STABILITY CLASS INDEX
*
202 M2IBDSTB001 4 * D-STABILITY, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER RAIN RATE
*
203 M2BNDRAN001 5.0 * MM/HR, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER WIND SPEED
*
204 M2BNDWND001 5.0 * M/S, USER'S GUIDE APPENDIX C
*
* *****
* METEOROLOGICAL BIN SAMPLING (M4) DATA
* *****
*
* NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
M4NRNINT001 5 * USER'S GUIDE APPENDIX C/NUREG 4551 APPENDIX A
*
* ENDPOINTS OF THE RAIN DISTANCE INTERVALS (KILOMETERS)
*
* NOTE: THESE MUST BE CHOSEN TO MATCH THE SPATIAL ENDPOINT DISTANCES

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

* SPECIFIED FOR ARRAY SPAEND (10 % ERROR IS ALLOWED)
*
* 2.0 5.0 10.0 30.0 50.0 MILES
*
206 M4RNDSTS001 3.22 8.05 16.1 48.3 80.5 *KM
*
* NUMBER OF RAIN INTENSITY BREAKPOINTS
*
207 M4NRINTN001 3 * USER'S GUIDE APPENDIX C
*
* RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
*
208 M4RNRATE001 2. 4. 6. * USER'S GUIDE APPENDIX C
*
* NUMBER OF WEATHER SAMPLES PER BIN
* USER'S GUIDE APPENDIX C USED 4. MORE SAMPLES ARE PREFERRED, BUT THIS INCREASES
* COMPUTING TIME. USED 12 IN THIS ANALYSIS - MORE ACCURATE WITH REASONABLE RUN TIME
*
209 M4NSMPLS001 12 *4 MINIMUM, 24 MAXIMUM
*
* INITIAL SEED FOR RANDOM NUMBER GENERATOR FOR WEATHER SAMPLING
*
210 M4IRSEED001 79
*****
* RELEASE DATA (2/2)
*****
*
* SOURCE TERM NUMBER 1 OF 6
*****
211 RDATNAM2001 'RC1' * SOURCE TITLE
212 RDOALARM001 1.05E+05 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
213 RDNUMREL001 4 * NUMBER OF PLUMES MODELED
214 RDMAXRIS001 1 * RISK-DOMINANT PLUME

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-17 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

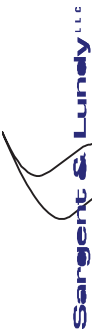
	Safety Related	X	Non-Safety Related																
215	RDREFTIM001	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
216	RDPLHEAT001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
217	RDPLHITE001	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
218	RDPLUDUR001	1.52E+04	3.60E+04	3.60E+04	3.60E+04	3.60E+04	3.60E+04	3.60E+04	3.60E+04	3.60E+04	3.60E+04	3.60E+04	3.60E+04	3.60E+04	3.60E+04	3.60E+04	3.60E+04	3.60E+04	3.60E+04
219	RDPELAY001	1.02E+05	1.17E+05	1.53E+05	1.53E+05	2.39E+05	2.39E+05	2.39E+05	2.39E+05	2.39E+05	2.39E+05	2.39E+05	2.39E+05	2.39E+05	2.39E+05	2.39E+05	2.39E+05	2.39E+05	2.39E+05
	*	Xe/Kr	I	Cs	Te	Sr	Ru	Ce	Ba										
220	RDRELFRC001	6.88E-01	1.96E-01	1.56E-01	8.55E-02	3.49E-02	1.45E-02	1.47E-05	4.34E-05	2.90E-03									
221	RDRELFRC002	2.48E-01	8.73E-02	3.91E-02	3.91E-02	4.55E-03	3.87E-03	2.25E-04	2.38E-04	8.82E-03									
222	RDRELFRC003	2.72E-03	4.03E-03	8.47E-03	7.88E-03	3.71E-03	4.21E-03	2.12E-03	1.35E-03	3.50E-03									
223	RDRELFRC004	4.87E-03	2.29E-03	2.66E-03	6.09E-04	1.85E-04	7.59E-05	6.23E-04	5.30E-04	9.68E-05									

***** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT *****

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ = 518
 NUMBER OF BLANK OR COMMENT RECORDS READ = 294
 NUMBER OF TERMINATOR RECORDS = 1
 NUMBER OF RECORDS PROCESSED = 223
 NUMBER OF PROCESSED RECORDS DUPLICATED = 0
 NUMBER OF PROCESSED RECORDS SORTED = 223

Decay Chain # Ba-139
 Decay Chain # Ba-140 La-140
 Fraction of Ba-140 going to La-140 in this chain = 1.000000
 Decay Chain # Ce-143 Pr-143
 Fraction of Ce-143 going to Pr-143 in this chain = 1.000000
 Decay Chain # Ce-144



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-18 of 1.3-265

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

Decay Chain # Cm-242 Pu-238
 Fraction of Cm-242 going to Pu-238 in this chain = 1.0000000

Decay Chain # Cm-244 Pu-240
 Fraction of Cm-244 going to Pu-240 in this chain = 1.0000000

Decay Chain # Co-58

Decay Chain # Co-60

Decay Chain # Cs-134

Decay Chain # Cs-136

Decay Chain # Cs-137

Decay Chain # I-133 Xe-133
 Fraction of I-133 going to Xe-133 in this chain = 0.9710000

Decay Chain # I-134

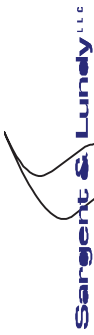
Decay Chain # I-135 Xe-135
 Fraction of I-135 going to Xe-135 in this chain = 0.8460000

Decay Chain # Kr-85m Kr-85
 Fraction of Kr-85m going to Kr-85 in this chain = 0.2110000

Decay Chain # Kr-87

Decay Chain # Kr-88

Decay Chain # La-141 Ce-141
 Fraction of La-141 going to Ce-141 in this chain = 1.0000000



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related Non-Safety Related

Page 1.3-19 of 1.3-265

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Decay Chain # La-142

Decay Chain # Mo-99 Tc-99m
 Fraction of Mo-99 going to Tc-99m in this chain = 0.876000

Decay Chain # Nd-147

Decay Chain # Np-239 Pu-239
 Fraction of Np-239 going to Pu-239 in this chain = 1.000000

Decay Chain # Pu-241 Am-241
 Fraction of Pu-241 going to Am-241 in this chain = 1.000000

Decay Chain # Rb-86

Decay Chain # Ru-103

Decay Chain # Ru-105 Rh-105
 Fraction of Ru-105 going to Rh-105 in this chain = 1.000000

Decay Chain # Ru-106

Decay Chain # Sb-127 Te-127
 Fraction of Sb-127 going to Te-127 in this chain = 0.824000

Decay Chain # Sb-127 Te-127m Te-127
 Fraction of Sb-127 going to Te-127m in this chain = 0.176000
 Fraction of Sb-127 going to Te-127 in this chain = 0.171776
 Fraction of Te-127m going to Te-127 in this chain = 0.976000

Decay Chain # Sb-129 Te-129
 Fraction of Sb-129 going to Te-129 in this chain = 0.775000

Decay Chain # Sb-129 Te-129m Te-129
 Fraction of Sb-129 going to Te-129m in this chain = 0.225000



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-20 of 1.3-265

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

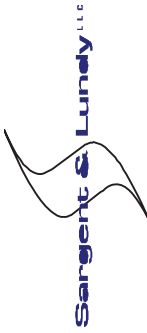
Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

Fraction of Sb-129 going to Te-129 in this chain = 0.146250
 Fraction of Te-129m going to Te-129 in this chain = 0.650000

- Decay Chain # Sr-89
- Decay Chain # Sr-90 going to Y-90 in this chain = 1.000000
- Decay Chain # Sr-91 going to Y-91 in this chain = 0.422000
- Decay Chain # Sr-92 going to Y-92 in this chain = 1.000000
- Decay Chain # Te-131m I-131 in this chain = 0.778000
- Decay Chain # Te-132 I-132 in this chain = 1.000000
- Decay Chain # Y-93
- Decay Chain # Zr-95 Nb-95
- Decay Chain # Zr-95 going to Nb-95 in this chain = 0.993000
- Decay Chain # Zr-97

WARNING: plume # 2 overlaps preceding plume

RELEASED INVENTORY OF ALL PLUMES			
Co-60	2.28E+14	6.10E+13	6.63E+13
Kr-85	4.33E+16	1.56E+16	1.71E+14
Kr-85m	6.97E+15	8.43E+14	1.97E+12
			1.20E+12
			3.06E+14
			8.74E+10



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.3-21 of 1.3-265

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

	Safety Related	X	Non-Safety Related	Equip. No.
Kr-87	9.15E+10		7.05E+08	3.32E+04
Kr-88	1.23E+15		7.91E+13	7.56E+10
Rb-86	1.83E+15		4.55E+14	9.70E+13
Sr-89	1.41E+15		1.83E+16	1.48E+16
Sr-90	1.76E+14		2.29E+15	1.87E+15
Sr-91	1.93E+14		1.51E+15	5.92E+14
Sr-92	8.04E+11		1.72E+12	1.09E+11
Y-90	5.50E+13		8.44E+14	1.43E+15
Y-91	8.16E+13		1.24E+15	1.11E+16
Y-92	1.39E+13		4.86E+13	6.87E+12
Y-93	1.18E+13		1.12E+14	5.30E+14
Zr-95	1.11E+14		1.69E+15	1.59E+16
Zr-97	3.28E+13		3.76E+14	2.35E+15
Nb-95	1.14E+14		1.74E+15	1.64E+16
Mo-99	8.85E+16		2.19E+16	2.15E+16
Tc-99m	8.49E+16		2.11E+16	2.07E+16
Ru-103	9.97E+16		2.65E+16	2.86E+16
Ru-105	6.11E+14		5.42E+13	1.24E+13
Ru-106	3.95E+16		1.05E+16	1.15E+16
Rh-105	4.18E+16		9.74E+15	8.71E+15
Sb-127	3.37E+16		1.46E+16	2.74E+15
Sb-129	9.45E+14		1.39E+14	5.64E+12
Te-127	3.62E+16		1.59E+16	3.01E+15
Te-127m	5.61E+15		2.56E+15	5.17E+14
Te-129	1.27E+16		5.48E+15	1.07E+15
Te-129m	1.80E+16		8.19E+15	1.64E+15
Te-131m	2.76E+16		1.07E+16	1.71E+15
Te-132	4.13E+17		1.77E+17	3.27E+16
I-131	7.90E+17		3.43E+17	1.56E+16
I-132	4.26E+17		1.83E+17	3.37E+16
I-133	6.39E+17		2.25E+17	7.44E+15
I-134	6.78E+07		1.14E+05	1.94E+00
I-135	6.76E+16		1.44E+16	2.32E+14
Xe-133	5.42E+18		1.90E+18	2.28E+16
Xe-135	3.84E+17		9.86E+16	1.70E+15



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.3-22 of 1.3-265

Client PSEG Nuclear Development	Safety Related X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

Cs-134	1.91E+17	4.80E+16	1.04E+16	3.26E+15
Cs-136	4.88E+16	1.21E+16	2.55E+15	7.61E+14
Cs-137	1.09E+17	2.73E+16	5.92E+15	1.86E+15
Ba-139	5.20E+09	4.55E+08	1.18E+06	1.98E-01
Ba-140	2.09E+16	6.26E+16	2.43E+16	6.37E+14
La-140	8.88E+15	3.19E+16	2.18E+16	1.95E+15
La-141	4.99E+11	2.20E+12	3.55E+12	1.54E+10
La-142	1.17E+08	7.53E+07	7.91E+06	5.03E+01
Ce-141	3.12E+14	1.70E+15	9.60E+15	3.68E+15
Ce-143	1.54E+14	7.29E+14	3.35E+15	7.97E+14
Ce-144	2.58E+14	1.41E+15	8.00E+15	3.13E+15
Pr-143	1.05E+14	1.46E+15	1.32E+16	3.80E+15
Nd-147	4.00E+13	6.01E+14	5.52E+15	1.52E+15
Np-239	2.81E+15	1.41E+16	7.09E+16	2.08E+16
Pu-238	1.18E+12	6.45E+12	3.66E+13	1.44E+13
Pu-239	8.91E+10	4.89E+11	2.78E+12	1.09E+12
Pu-240	1.39E+11	7.63E+11	4.33E+12	1.70E+12
Pu-241	3.08E+13	1.69E+14	9.59E+14	3.76E+14
Am-241	1.43E+10	2.17E+11	2.04E+12	6.02E+11
Cm-242	3.47E+12	5.31E+13	4.99E+14	1.46E+14
Cm-244	4.24E+11	6.49E+12	6.12E+13	1.80E+13

READING FROM A WEATHER FILE WITH THE FOLLOWING HEADER:

SL HC MET 2004 - SHCMET04.inp - Orig: G. Tegarden 7/22/08 Verf: M. Saunders 7/24
 DAY HR DRSP S PC - Supporting Calc: SLHC-MET.XLS

METEOROLOGICAL DATA FILE CONTAINS 505 HOURS OF OBSERVED RAIN DATA.
 ACCUMULATED RAIN MEASUREMENTS TOTALED 43.71 INCHES FOR THE YEAR.
 CONSTANT LID HEIGHTS (M) FOR 4 SEASONS = 1000 1700 1700 1200
 NON-ZERO WINDSPEEDS LESS THAN 0.5 M/S ARE SET TO 0.5 M/S

NUMTRI= 390

* * * * * METEOROLOGICAL BIN SUMMARY * * * * *

BIN PRIORITIES

RI XX - RAIN INTENSITY I WITHIN THE INTERVAL ENDING AT XX



Calcs. For ENVIRONMENTAL CONSEQUENCE		2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development			
Project PSEG ESPA			
Proj. No	12380-001	Equip. No.	

Calc No.	2009-11222	
Rev.	2	Date
Page	1.3-23	of 1.3-265

Prepared by	Date
Reviewed by	Date
Approved by	Date

S V - INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5 INTERVAL ENDPOINTS ARE 3 8 16 48 80 RAIN INTENSITIES ARE IN MILLIMETERS OF RAIN PER HOUR, THE 3 INTENSITY BREAKPOINTS ARE 2.0 4.0 6.0 INITIAL WEATHER CONDITIONS WITH STABILITY CLASS S AND WIND SPEED INTERVAL V STABILITY CLASSES ARE B = A/B, D = C/D, E = E, AND F = F WIND SPEED INTERVALS ARE IN METERS PER SECOND, 1 (0-1), 2 (1-2), 3 (2-3), 4 (3-5), 5 (5-7), 6 (GT 7)

WIND DIRECTION

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL	PER CENT
METBIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL	PER CENT
1 B	3	0.192	0.000	0.269	0.038	0.115	0.077	0.000	0.038	0.038	0.000	0.000	0.000	0.077	0.000	0.115	26	0.2968
2 B	4	0.005	0.005	0.027	0.050	0.087	0.092	0.244	0.154	0.062	0.040	0.020	0.002	0.015	0.100	0.082	402	4.5890
3 D	1	0.000	0.030	0.061	0.000	0.000	0.061	0.030	0.091	0.091	0.212	0.121	0.091	0.121	0.030	0.061	33	0.3767
4 D	2	0.073	0.076	0.055	0.049	0.055	0.067	0.064	0.076	0.076	0.089	0.070	0.064	0.040	0.031	0.080	327	3.7329
5 D	3	0.085	0.076	0.118	0.066	0.069	0.055	0.055	0.069	0.070	0.054	0.049	0.054	0.046	0.021	0.040	669	7.6370
6 D	4	0.076	0.073	0.072	0.058	0.077	0.062	0.097	0.077	0.050	0.097	0.087	0.022	0.004	0.017	0.051	1279	14.6005
7 D	5	0.082	0.071	0.031	0.031	0.068	0.136	0.179	0.058	0.066	0.044	0.025	0.005	0.000	0.011	0.112	804	9.1781
8 D	6	0.014	0.007	0.011	0.007	0.032	0.202	0.245	0.097	0.014	0.011	0.007	0.000	0.007	0.260	0.083	277	3.1621
9 E	1	0.033	0.054	0.022	0.011	0.087	0.087	0.076	0.043	0.087	0.109	0.076	0.109	0.054	0.033	0.043	92	1.0502
10 E	2	0.035	0.046	0.053	0.064	0.059	0.057	0.073	0.064	0.059	0.092	0.088	0.090	0.101	0.031	0.033	455	5.1941
11 E	3	0.040	0.047	0.099	0.086	0.066	0.071	0.110	0.079	0.079	0.073	0.076	0.039	0.020	0.037	0.040	700	7.9909
12 E	4	0.064	0.092	0.060	0.082	0.073	0.076	0.132	0.080	0.097	0.043	0.019	0.006	0.002	0.021	0.104	1334	15.2283
13 F	1	0.083	0.021	0.063	0.021	0.063	0.104	0.042	0.021	0.021	0.125	0.042	0.125	0.125	0.104	0.000	48	0.5479
14 F	2	0.055	0.051	0.051	0.051	0.051	0.038	0.025	0.030	0.093	0.101	0.097	0.089	0.105	0.046	0.068	237	2.7055
15 F	3	0.022	0.022	0.071	0.045	0.029	0.035	0.071	0.074	0.115	0.074	0.119	0.032	0.006	0.061	0.176	312	3.5616
16 F	4	0.018	0.042	0.057	0.084	0.027	0.018	0.066	0.063	0.066	0.057	0.033	0.003	0.000	0.003	0.396	333	3.8014
17 R1	3	0.030	0.033	0.033	0.025	0.044	0.033	0.030	0.044	0.072	0.107	0.152	0.140	0.066	0.041	0.083	363	4.1438
18 R1	8	0.024	0.000	0.000	0.071	0.024	0.048	0.048	0.048	0.048	0.048	0.119	0.167	0.190	0.024	0.071	42	0.4795
19 R1	16	0.030	0.050	0.060	0.100	0.030	0.020	0.020	0.050	0.030	0.080	0.180	0.170	0.050	0.040	0.050	100	1.1416
20 R1	48	0.057	0.048	0.063	0.069	0.015	0.021	0.051	0.030	0.021	0.078	0.147	0.141	0.051	0.054	0.078	333	3.8014
21 R1	80	0.060	0.075	0.075	0.032	0.024	0.004	0.028	0.032	0.044	0.087	0.127	0.091	0.044	0.063	0.107	252	2.8767
22 R2	3	0.053	0.000	0.000	0.039	0.013	0.013	0.053	0.026	0.026	0.158	0.171	0.105	0.039	0.053	0.171	76	0.8676
23 R2	8	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.000	0.000	0.333	0.000	3	0.0342
24 R2	16	0.000	0.100	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.100	0.000	0.300	0.100	0.200	10	0.1142
25 R2	48	0.063	0.094	0.000	0.063	0.000	0.031	0.000	0.063	0.000	0.031	0.219	0.063	0.094	0.156	0.125	32	0.3653
26 R2	80	0.065	0.065	0.097	0.000	0.000	0.000	0.000	0.032	0.000	0.032	0.097	0.290	0.097	0.032	0.161	31	0.3539



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No.	2009-11222		
Rev.	2	Date	
Page		1.3-24 of 1.3-265	

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

27	R3	3	0.103	0.034	0.000	0.000	0.034	0.034	0.103	0.103	0.069	0.138	0.069	0.3311
28	R3	8	0.000	0.333	0.000	0.000	0.000	0.333	0.000	0.333	0.000	0.000	0.333	0.0342
29	R3	16	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.125	0.000	0.250	0.000	0.0913
30	R3	48	0.111	0.148	0.185	0.074	0.000	0.037	0.000	0.111	0.074	0.185	0.037	0.3082
31	R3	80	0.100	0.033	0.167	0.000	0.100	0.000	0.000	0.100	0.067	0.200	0.200	0.3425
32	R4	3	0.026	0.000	0.026	0.053	0.000	0.026	0.132	0.079	0.026	0.237	0.158	0.4338
34	R4	16	0.000	0.167	0.000	0.000	0.000	0.000	0.167	0.167	0.000	0.167	0.000	0.0685
35	R4	48	0.077	0.038	0.000	0.000	0.000	0.038	0.038	0.077	0.038	0.577	0.077	0.2968
36	R4	80	0.130	0.087	0.000	0.000	0.087	0.043	0.000	0.000	0.000	0.478	0.174	0.2626
37	ALL		0.056	0.059	0.062	0.057	0.058	0.067	0.101	0.069	0.046	0.099	0.067	8760



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related		Rev. 2 Date	
X Non-Safety Related		Page 1.3-25 of 1.3-265	
Client PSEG Nuclear Development		Prepared by	
Project PSEG ESPA		Reviewed by	
Proj. No 12380-001		Approved by	
Equip. No.		Date	

* * * * * METEOROLOGICAL BIN SUMMARY * * * * *

BIN PRIORITIES

RI XX - RAIN INTENSITY I WITHIN THE INTERVAL ENDING AT XX
 INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5 INTERVAL ENDPOINTS ARE 3 8 16 48 80
 RAIN INTENSITIES ARE IN MILLIMETERS OF RAIN PER HOUR, THE 3 INTENSITY BREAKPOINTS ARE 2.0 4.0 6.0

S V - INITIAL WEATHER CONDITIONS WITH STABILITY CLASS S AND WIND SPEED INTERVAL V
 STABILITY CLASSES ARE B = A/B, D = C/D, E = E, AND F = F
 WIND SPEED INTERVALS ARE IN METERS PER SECOND (M/S), 1 (0-1), 2 (1-2), 3 (2-3), 4 (3-5), 5 (5-7), 6 (GT 7)

METBIN	WIND DIRECTION																TOTAL	PER CENT	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
1 B	3	5	0	7	1	3	2	0	1	1	0	0	0	1	2	0	3	26	0.2968
2 B	4	2	2	11	20	35	37	98	62	25	16	8	1	6	6	40	33	402	4.5890
3 D	1	0	1	2	0	0	2	1	3	3	7	4	3	4	1	0	2	33	0.3767
4 D	2	24	25	18	16	18	22	21	25	25	29	23	21	13	10	11	26	327	3.7329
5 D	3	57	51	79	44	46	37	37	46	47	36	33	36	31	14	27	48	669	7.6370
6 D	4	97	94	92	74	99	79	124	99	64	124	111	28	5	22	65	102	1279	14.6005
7 D	5	66	57	25	25	55	109	144	47	53	35	20	4	0	9	90	65	804	9.1781
8 D	6	4	2	3	2	9	56	68	27	4	3	2	0	0	2	72	23	277	3.1621
9 E	1	3	5	2	1	8	8	7	4	8	10	7	10	7	5	3	4	92	1.0502
10 E	2	16	21	24	29	27	26	33	29	27	42	40	41	46	14	15	25	455	5.1941
11 E	3	28	33	69	60	46	50	77	55	55	51	53	27	14	26	28	28	700	7.9909
12 E	4	85	123	80	109	98	102	176	107	129	57	26	8	3	28	139	64	1334	15.2283
13 F	1	4	1	3	1	3	5	2	1	1	6	2	6	2	6	5	0	48	0.5479
14 F	2	13	12	12	12	12	9	6	7	22	24	23	21	25	11	16	12	237	2.7055
15 F	3	7	7	22	14	9	11	22	23	36	23	37	10	2	19	55	15	312	3.5616
16 F	4	6	14	19	28	9	6	22	21	22	19	11	1	0	1	132	22	333	3.8014
17 R1	3	11	12	12	9	16	12	11	16	26	39	55	51	24	15	30	24	363	4.1438
18 R1	8	1	0	0	3	1	2	2	2	2	2	5	7	8	1	3	3	42	0.4795
19 R1	16	3	5	6	10	3	2	2	5	3	8	18	17	5	4	4	5	100	1.1416
20 R1	48	19	16	21	23	5	7	17	10	7	26	49	47	17	18	26	25	333	3.8014
21 R1	80	15	19	19	8	6	1	7	8	11	22	32	23	11	16	27	27	252	2.8767
22 R2	3	4	0	0	3	1	1	4	2	2	12	13	8	3	4	13	6	76	0.8676



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.3-26 of 1.3-265	

Client PSEG Nuclear Development	Prepared by	Date	
Project PSEG ESPA	Reviewed by	Date	
Proj. No 12380-001	Approved by	Date	

	Safety Related	X	Non-Safety Related													
23 R2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0342
24 R2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1142
25 R2	2	3	0	1	0	2	0	0	0	0	0	0	0	0	0	0.3653
26 R2	2	2	3	0	0	0	0	1	0	0	0	0	0	0	0	0.3539
27 R3	3	1	0	0	1	1	1	1	3	0	0	0	0	0	0	0.3311
28 R3	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0.0342
29 R3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0913
30 R3	3	4	5	2	0	0	1	0	0	0	0	0	0	0	0	0.3082
31 R3	3	1	5	0	0	0	3	0	0	0	0	0	0	0	0	0.3425
32 R4	3	1	0	1	2	0	1	1	1	5	3	1	4	2	9	0.4338
33 R4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0000
34 R4	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0.0685
35 R4	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0.2968
36 R4	3	2	0	0	0	0	2	1	0	0	0	0	0	0	0	0.2626

* * * * * SUMMARIES * * * * *

R	74	71	74	62	32	28	51	50	55	120	190	185	81	72	168	119	1432	16.3470	
B	7	2	18	21	38	39	98	63	26	16	8	1	7	8	40	36	428	4.8858	
D	248	230	219	161	227	305	395	247	196	234	193	92	53	58	265	266	3389	38.6872	
E	132	182	175	199	179	186	293	195	219	160	126	86	70	73	185	121	2581	29.4635	
F	30	34	56	55	33	31	52	52	81	72	73	38	29	37	208	49	930	10.6164	
	1	7	7	2	11	15	10	8	12	23	13	19	13	12	8	6	173	1.9749	
	2	54	58	54	57	58	60	61	74	95	86	83	84	36	42	63	1023	11.6781	
	3	96	91	177	119	103	99	136	125	139	110	123	73	60	110	94	1703	19.4406	
	4	165	199	185	218	208	191	279	213	190	200	152	37	14	55	249	174	2729	31.1530
	5	91	85	40	36	83	131	245	116	96	51	24	5	0	11	205	100	1319	15.0571
	6	4	8	5	4	14	67	108	34	11	3	2	0	2	84	35	381	4.3493	



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.3-29 of 1.3-265

Client	PSEG Nuclear Development			Prepared by	Date
Project	PSEG ESPA			Reviewed by	Date
Proj. No	12380-001	Equip. No.		Approved by	Date

33	0.052	0.050	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000															
34	0.052	0.050	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000															
35	0.052	0.050	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000															
36	0.052	0.050	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000															
37	0.056	0.059	0.062	0.057	0.058	0.101	0.069	0.066	0.069	0.067	0.046	0.027	0.028	0.099	0.067
1.000000															

***** BEGINNING OF CHANGE CASE 1 USER INPUT *****

* *****

* SOURCE TERM NUMBER 2 OF 6

* *****

224 RDATNAM2001 'RC2' * SOURCE TITLE
 ***** RECORD NUMBER 224 REPLACES RECORD NUMBER 211 *****
 225 RDOALARM001 1.16E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 ***** RECORD NUMBER 225 REPLACES RECORD NUMBER 212 *****
 226 RDNUMREL001 4 *NUMBER OF PLUMES MODELED
 ***** RECORD NUMBER 226 REPLACES RECORD NUMBER 213 *****
 227 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 ***** RECORD NUMBER 227 REPLACES RECORD NUMBER 214 *****
 228 RDREFTIM001 0.5 0.5 0.5 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 ***** RECORD NUMBER 228 REPLACES RECORD NUMBER 215 *****
 229 RDPLHEAT001 0.0 0.0 0.0 0.0 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 ***** RECORD NUMBER 229 REPLACES RECORD NUMBER 216 *****
 230 RDPLHITE001 0.0 0.0 0.0 0.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
 ***** RECORD NUMBER 230 REPLACES RECORD NUMBER 217 *****
 231 RDPLDUR001 3.28E+04 3.60E+04 3.60E+04 3.60E+04 * DURATION OF PLUMES
 ***** RECORD NUMBER 231 REPLACES RECORD NUMBER 218 *****
 232 RDPDELAY001 9.01E+03 4.18E+04 9.50E+04 1.63E+05 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page	1.3-30	of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

```

***** RECORD NUMBER 232 REPLACES RECORD NUMBER 219 *****
*
233 RDRELFRC001 7.31E-01 3.61E-02 2.13E-02 3.56E-02 5.14E-03 1.50E-02 3.62E-03 1.95E-03 8.12E-03
***** RECORD NUMBER 233 REPLACES RECORD NUMBER 220 *****
234 RDRELFRC002 2.38E-01 3.22E-02 4.19E-03 7.24E-03 2.61E-04 7.07E-04 4.01E-04 3.65E-04 4.38E-04
***** RECORD NUMBER 234 REPLACES RECORD NUMBER 221 *****
235 RDRELFRC003 2.20E-02 1.65E-01 1.16E-02 2.86E-02 1.23E-03 4.00E-05 5.18E-05 1.58E-04 1.50E-03
***** RECORD NUMBER 235 REPLACES RECORD NUMBER 222 *****
236 RDRELFRC004 5.37E-03 4.70E-02 5.46E-03 5.88E-03 1.11E-03 6.12E-05 5.64E-05 2.47E-04 1.11E-03
***** RECORD NUMBER 236 REPLACES RECORD NUMBER 223 *****

```

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 1 USER INPUT *****

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 1
NUMBER OF RECORDS CHANGED = 13
NUMBER OF RECORDS ADDED = 0

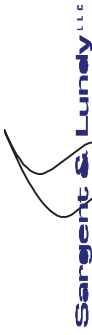
```

WARNING: plume # 2 overlaps preceding plume

```

RELEASED INVENTORY OF ALL PLUMES
Co-60 2.36E+14 1.11E+13 6.30E+11 9.64E+11
Kr-85 4.60E+16 1.50E+16 1.38E+15 3.38E+14
Kr-85m 2.76E+17 2.05E+16 1.92E+14 2.53E+12
Kr-87 3.34E+16 5.96E+13 1.75E+09 1.44E+04
Kr-88 3.93E+17 1.24E+16 3.12E+13 7.58E+10
Rb-86 2.60E+14 5.03E+13 1.36E+14 6.22E+13
Sr-89 2.10E+16 1.06E+15 4.96E+15 4.43E+15
Sr-90 2.59E+15 1.31E+14 6.19E+14 5.58E+14
Sr-91 1.57E+16 3.97E+14 6.36E+14 1.45E+14
Sr-92 4.69E+15 2.07E+13 2.23E+12 1.60E+10

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Client PSEG Nuclear Development	Safety Related	X	Non-Safety Related
Project PSEG ESPA			
Proj. No 12380-001	Equip. No.		
	Prepared by		
	Reviewed by		
	Approved by		
	Date		
	Date		
	Date		

Y-90	1.98E+15	2.00E+14	1.98E+14	2.52E+14
Y-91	1.93E+16	2.12E+15	2.88E+14	3.09E+14
Y-92	1.31E+16	2.02E+14	4.11E+13	1.03E+12
Y-93	1.45E+16	8.35E+14	3.91E+13	1.17E+13
Zr-95	2.76E+16	3.05E+15	3.91E+14	4.22E+14
Zr-97	2.11E+16	1.58E+15	1.11E+14	5.57E+13
Nb-95	2.80E+16	3.10E+15	4.00E+14	4.36E+14
Mo-99	1.17E+17	4.99E+15	2.42E+14	3.03E+14
Tc-99m	1.08E+17	4.73E+15	2.32E+14	2.92E+14
Ru-103	1.05E+17	4.91E+15	2.75E+14	4.15E+14
Ru-105	2.43E+16	2.58E+14	1.45E+12	1.17E+11
Ru-106	4.09E+16	1.93E+15	1.09E+14	1.66E+14
Rh-105	6.51E+16	2.64E+15	1.13E+14	1.20E+14
Sb-127	1.67E+16	3.17E+15	1.12E+16	2.00E+15
Sb-129	1.68E+16	7.36E+14	2.72E+14	2.70E+12
Te-127	1.71E+16	3.31E+15	1.20E+16	2.21E+15
Te-127m	2.33E+15	4.75E+14	1.88E+15	3.86E+14
Te-129	2.26E+16	1.78E+15	4.21E+15	7.96E+14
Te-129m	7.64E+15	1.54E+15	6.02E+15	1.22E+15
Te-131m	1.97E+16	3.21E+15	9.02E+15	1.20E+15
Te-132	2.12E+17	3.95E+16	1.37E+17	2.38E+16
I-131	1.58E+17	1.36E+17	6.61E+17	1.76E+17
I-132	2.18E+17	4.18E+16	1.41E+17	2.45E+16
I-133	2.57E+17	1.66E+17	5.21E+17	7.91E+16
I-134	1.34E+15	6.27E+11	2.71E+07	2.52E+00
I-135	1.45E+17	4.74E+16	5.15E+16	2.03E+15
Xe-133	6.36E+18	1.98E+18	3.07E+17	8.31E+16
Xe-135	1.16E+18	2.36E+17	1.74E+17	1.50E+16
Cs-134	2.62E+16	5.14E+15	1.42E+16	6.69E+15
Cs-136	7.02E+15	1.35E+15	3.62E+15	1.64E+15
Cs-137	1.49E+16	2.93E+15	8.11E+15	3.82E+15
Ba-139	1.86E+15	8.25E+11	1.67E+09	9.27E+04
Ba-140	6.18E+16	3.26E+15	1.08E+16	7.66E+15
La-140	3.30E+16	3.26E+15	4.90E+15	4.85E+15
La-141	7.60E+15	1.56E+14	1.49E+12	5.79E+10



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.3-32 of 1.3-265

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

	Safety Related	X	Non-Safety Related	
Ia-142	1.07E+15		2.71E+08	6.04E+04
Ce-141	1.44E+16		1.13E+15	1.74E+15
Ce-143	1.13E+16		5.50E+14	5.79E+14
Ce-144	1.16E+16		9.38E+14	1.46E+15
Pr-143	2.38E+16		3.71E+14	4.39E+14
Nd-147	1.05E+16		1.41E+14	1.46E+14
Np-239	1.68E+17		1.01E+16	1.25E+16
Pu-238	5.28E+13		4.28E+12	6.69E+12
Pu-239	3.99E+12		3.25E+11	5.08E+11
Pu-240	6.26E+12		5.07E+11	7.92E+11
Pu-241	1.39E+15		1.12E+14	1.75E+14
Am-241	3.47E+12		5.03E+10	5.57E+10
Cm-242	8.59E+14		1.22E+13	1.33E+13
Cm-244	1.04E+14		1.16E+13	1.49E+12

***** BEGINNING OF CHANGE CASE 2 USER INPUT *****

* SOURCE TERM NUMBER 3 OF 6

237 RDATNAM2001 'RC3'

***** RECORD NUMBER 237 REPLACES RECORD NUMBER 211 *****

238 RDOALARM001 1.72E+05

***** RECORD NUMBER 238 REPLACES RECORD NUMBER 212 *****

* ALARM IS INITIATED

239 RDNUMREL001 4

***** RECORD NUMBER 239 REPLACES RECORD NUMBER 213 *****

240 RDMAXRIS001 1

***** RECORD NUMBER 240 REPLACES RECORD NUMBER 214 *****

241 RDREFTIM001 0.5

***** RECORD NUMBER 241 REPLACES RECORD NUMBER 215 *****

* REPRESENTATIVE TIME POINT FOR DISPERSION

* AND RADIOACTIVE DECAY (MIDPOINT)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-33 of 1.3-265

Safety Related X Non-Safety Related

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

242 RDPLHEAT001 0.0 0.0 0.0 0.0 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 242 REPLACES RECORD NUMBER 216 *****
243 RDPLHITE001 0.0 0.0 0.0 0.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 243 REPLACES RECORD NUMBER 217 *****
244 RDPLUDUR001 3.60E+04 3.60E+04 3.60E+04 * DURATION OF PLUMES
***** RECORD NUMBER 244 REPLACES RECORD NUMBER 218 *****
245 RDPDELAY001 1.70E+05 2.11E+05 2.55E+05 * TIME OF RELEASE FOR EACH PLUME
***** RECORD NUMBER 245 REPLACES RECORD NUMBER 219 *****
*
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
246 RDRELFRC001 9.38E-01 4.70E-01 4.58E-01 4.19E-01 4.22E-02 2.71E-01 1.49E-03 6.33E-03 1.02E-01
***** RECORD NUMBER 246 REPLACES RECORD NUMBER 220 *****
247 RDRELFRC002 4.74E-02 8.37E-03 6.51E-03 6.41E-03 1.77E-03 4.94E-03 6.60E-05 8.66E-05 3.49E-03
***** RECORD NUMBER 247 REPLACES RECORD NUMBER 221 *****
248 RDRELFRC003 1.45E-03 1.03E-03 1.11E-03 2.84E-03 4.37E-04 1.84E-04 6.37E-06 6.00E-05 2.24E-04
***** RECORD NUMBER 248 REPLACES RECORD NUMBER 222 *****
249 RDRELFRC004 5.54E-04 2.46E-04 1.80E-05 1.49E-03 5.37E-05 0.00E+00 2.33E-07 2.75E-06 2.42E-05
***** RECORD NUMBER 249 REPLACES RECORD NUMBER 223 *****

```

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 2 USER INPUT *****

```

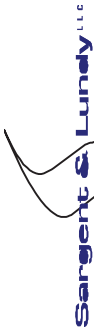
USER INPUT PROCESSING SUMMARY - CHANGE CASE 2
NUMBER OF RECORDS CHANGED = 13
NUMBER OF RECORDS ADDED = 0

```

```

RELEASED INVENTORY OF ALL PLUMES
Co-60 4.27E+15 7.78E+13 2.90E+12 0.00E+00
Kr-85 5.90E+16 2.98E+15 9.12E+13 3.48E+13
Kr-85m 3.27E+14 2.84E+12 1.31E+10 1.35E+08
Kr-87 8.73E+05 8.88E+01 3.47E-03 3.98E-09

```

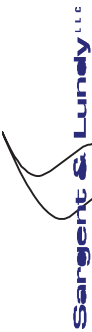


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.3-34 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

		X	Non-Safety Related	Safety Related	Equip. No.					
Kr-88	8.23E+12	2.58E+10	4.00E+07	5.14E+04						
Rb-86	5.20E+15	7.27E+13	1.22E+13	1.90E+11						
Sr-89	1.68E+17	7.01E+15	1.72E+15	2.08E+14						
Sr-90	2.12E+16	8.91E+14	2.20E+14	2.70E+13						
Sr-91	4.77E+15	8.72E+13	8.82E+12	1.98E+11						
Sr-92	3.70E+11	8.44E+08	9.14E+06	2.88E+03						
Y-90	9.62E+15	4.61E+14	1.25E+14	1.78E+13						
Y-91	8.33E+15	3.66E+14	3.88E+13	1.93E+12						
Y-92	2.68E+13	1.24E+11	2.80E+09	3.59E+06						
Y-93	2.69E+14	5.46E+12	2.28E+11	1.68E+09						
Zr-95	1.11E+16	4.91E+14	4.71E+13	1.71E+12						
Zr-97	1.36E+15	3.77E+13	2.21E+12	3.10E+10						
Nb-95	1.15E+16	5.10E+14	4.92E+13	1.80E+12						
Mo-99	1.32E+18	2.13E+16	6.97E+14	0.00E+00						
Tc-99m	1.27E+18	2.05E+16	6.72E+14	0.00E+00						
Ru-103	1.83E+18	3.31E+16	1.22E+15	0.00E+00						
Ru-105	3.81E+14	1.17E+12	6.49E+09	0.00E+00						
Ru-106	7.37E+17	1.34E+16	4.99E+14	0.00E+00						
Rh-105	5.11E+17	7.46E+15	2.19E+14	0.00E+00						
Sb-127	1.40E+17	1.97E+15	7.97E+14	3.51E+14						
Sb-129	1.41E+14	3.46E+11	2.16E+10	2.68E+08						
Te-127	1.55E+17	2.22E+15	9.12E+14	4.17E+14						
Te-127m	2.75E+16	4.20E+14	1.86E+14	9.74E+13						
Te-129	5.66E+16	8.55E+14	3.75E+14	1.93E+14						
Te-129m	8.67E+16	1.31E+15	5.76E+14	2.96E+14						
Te-131m	8.16E+16	9.60E+14	3.21E+14	9.81E+13						
Te-132	1.67E+18	2.31E+16	9.17E+15	3.91E+15						
I-131	1.76E+18	3.02E+16	3.67E+15	8.55E+14						
I-132	1.72E+18	2.38E+16	9.45E+15	4.03E+15						
I-133	7.42E+17	9.03E+15	7.40E+14	8.12E+13						
I-134	5.41E+00	1.18E-05	9.25E-11	2.15E-19						
I-135	1.65E+16	8.91E+13	3.04E+12	6.29E+10						
Xe-133	6.82E+18	3.10E+17	9.65E+15	3.13E+15						
Xe-135	1.73E+17	1.98E+15	6.46E+13	3.01E+12						
Cs-134	5.61E+17	7.98E+15	1.36E+15	2.20E+13						



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.3-35 of 1.3-265

Safety Related X Non-Safety Related

Client		PSEG Nuclear Development	
Project		PSEG ESPA	
Proj. No	12380-001	Equip. No.	
			Prepared by
			Reviewed by
			Approved by
			Date
			Date
			Date

Cs-136	1.37E+17	1.89E+15	3.14E+14	4.84E+12
Cs-137	3.20E+17	4.55E+15	7.76E+14	1.26E+13
Ba-139	3.21E+06	3.57E+02	4.91E-02	4.25E-08
Ba-140	7.01E+17	2.34E+16	1.46E+15	1.49E+14
La-140	4.42E+17	1.67E+16	1.15E+15	1.33E+14
La-141	1.09E+12	6.45E+09	7.21E+07	4.31E+04
La-142	6.65E+05	1.76E+02	6.98E-02	7.09E-08
Ce-141	4.45E+16	6.05E+14	4.13E+14	1.85E+13
Ce-143	1.42E+16	1.53E+14	8.22E+13	2.31E+12
Ce-144	3.75E+16	5.13E+14	3.55E+14	1.62E+13
Pr-143	1.15E+16	4.22E+14	6.54E+13	2.68E+12
Nd-147	3.83E+15	1.65E+14	1.54E+13	5.29E+11
Np-239	3.14E+17	3.73E+15	2.22E+15	7.66E+13
Pu-238	1.71E+14	2.35E+12	1.63E+12	7.45E+10
Pu-239	1.30E+13	1.78E+11	1.24E+11	5.68E+09
Pu-240	2.03E+13	2.78E+11	1.92E+11	8.82E+09
Pu-241	4.50E+15	6.15E+13	4.26E+13	1.95E+12
Am-241	1.47E+12	6.40E+10	6.70E+09	2.59E+08
Cm-242	3.51E+14	1.55E+13	1.49E+12	5.44E+10
Cm-244	4.30E+13	1.90E+12	1.84E+11	6.72E+09

***** BEGINNING OF CHANGE CASE 3 USER INPUT *****

*

 * SOURCE TERM NUMBER 4 OF 6

 *

250 RDATNAM2001 'RC4'
 ***** RECORD NUMBER 250 REPLACES RECORD NUMBER 211 * SOURCE TITLE
 251 RDOALARM001 1.83E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE
 ***** RECORD NUMBER 251 REPLACES RECORD NUMBER 212 * ALARM IS INITIATED
 * ALARM IS INITIATED
 252 RDNUMREL001 4 * NUMBER OF PLUMES MODELED
 ***** RECORD NUMBER 252 REPLACES RECORD NUMBER 213 *****



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No.	2009-11222	
Rev.	2	Date
Page	1.3-36	of 1.3-265

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development		Prepared by		Date
Project	PSEG ESPA		Reviewed by		Date
Proj. No	12380-001		Approved by		Date

```

253 RDMAXRIS001      1
***** RECORD NUMBER 253 REPLACES RECORD NUMBER 214 * RISK-DOMINANT PLUME
***** RDREFTIM001 0.5 0.5 0.5 0.5 * REPRESENTATIVE TIME POINT FOR
***** RECORD NUMBER 254 REPLACES RECORD NUMBER 215 *
*
*
255 RDPLHEAT001     0.0 0.0 0.0 0.0 * AND RADIOACTIVE DECAY (MIDPOINT)
***** RECORD NUMBER 255 REPLACES RECORD NUMBER 216 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
256 RDPLHITE001     0.0 0.0 0.0 0.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 256 REPLACES RECORD NUMBER 217 *
***** RDPLUDUR001 1.58E+04 3.17E+04 3.60E+04 3.60E+04 * DURATION OF PLUMES
***** RECORD NUMBER 257 REPLACES RECORD NUMBER 218 *
258 RDPDELAY001     7.80E+04 9.38E+04 1.25E+05 2.12E+05 * TIME OF RELEASE FOR EACH PLUME
***** RECORD NUMBER 258 REPLACES RECORD NUMBER 219 *
*
*
259 RDRELFRC001     9.98E-01 3.79E-02 3.29E-02 4.88E-02 4.53E-03 2.38E-02 1.21E-04 3.67E-04 2.29E-02
***** RECORD NUMBER 259 REPLACES RECORD NUMBER 220 *
260 RDRELFRC002     1.56E-03 1.66E-02 8.59E-03 3.77E-03 3.05E-04 2.79E-03 6.78E-07 3.49E-06 5.64E-04
***** RECORD NUMBER 260 REPLACES RECORD NUMBER 221 *
261 RDRELFRC003     2.72E-04 7.50E-03 3.40E-03 7.78E-03 1.32E-03 1.08E-05 1.51E-05 4.73E-04 4.69E-04
***** RECORD NUMBER 261 REPLACES RECORD NUMBER 222 *
262 RDRELFRC004     1.04E-04 6.34E-03 1.11E-03 2.78E-03 1.51E-06 0.00E+0 3.05E-08 9.57E-07 9.97E-07
***** RECORD NUMBER 262 REPLACES RECORD NUMBER 223 *

```

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 3 USER INPUT *****

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 3
NUMBER OF RECORDS CHANGED = 13
NUMBER OF RECORDS ADDED = 0

```



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.3-37 of 1.3-265

Client	PSEG Nuclear Development	X	Non-Safety Related
Project	PSEG ESPA		
Proj. No	12380-001		Equip. No.
		Prepared by	Date
		Reviewed by	Date
		Approved by	Date

WARNING: plume # 3 overlaps preceding plume

RELEASED INVENTORY OF ALL PLUMES

Co-60	3.75E+14	4.40E+13	1.70E+11	0.00E+00
Kr-85	6.28E+16	9.81E+13	1.71E+13	6.54E+12
Kr-85m	2.80E+16	1.58E+13	6.55E+11	5.96E+09
Kr-87	4.80E+12	2.06E+08	2.30E+05	1.68E-01
Kr-88	8.89E+15	2.78E+12	5.05E+10	5.29E+07
Rb-86	3.91E+14	1.01E+14	3.94E+13	1.24E+13
Sr-89	1.84E+16	1.23E+15	5.30E+15	5.98E+12
Sr-90	2.28E+15	1.53E+14	6.64E+14	7.60E+11
Sr-91	4.06E+15	1.69E+14	3.72E+14	7.29E+10
Sr-92	5.62E+13	7.00E+11	2.83E+11	6.71E+05
Y-90	5.69E+14	4.34E+13	2.37E+14	3.88E+11
Y-91	6.91E+14	7.48E+12	9.68E+13	1.79E+11
Y-92	5.91E+14	1.19E+13	9.13E+12	9.94E+07
Y-93	1.53E+14	5.46E+11	6.44E+12	2.48E+09
Zr-95	9.17E+14	5.12E+12	1.14E+14	2.27E+11
Zr-97	3.53E+14	1.51E+12	2.30E+13	1.72E+10
Nb-95	9.35E+14	5.24E+12	1.17E+14	2.35E+11
Mo-99	1.56E+17	1.70E+16	5.98E+13	0.00E+00
Tc-99m	1.49E+17	1.63E+16	5.75E+13	0.00E+00
Ru-103	1.64E+17	1.92E+16	7.37E+13	0.00E+00
Ru-105	2.80E+15	1.17E+14	1.07E+11	0.00E+00
Ru-106	6.49E+16	7.60E+15	2.94E+13	0.00E+00
Rh-105	7.79E+16	8.05E+15	2.60E+13	0.00E+00
Sb-127	2.02E+16	1.49E+15	2.86E+15	8.54E+14
Sb-129	1.55E+15	4.16E+13	1.94E+13	1.44E+11
Te-127	2.14E+16	1.59E+15	3.11E+15	9.60E+14
Te-127m	3.20E+15	2.47E+14	5.10E+14	1.82E+14
Te-129	8.37E+15	5.61E+14	1.08E+15	3.71E+14
Te-129m	1.03E+16	7.95E+14	1.63E+15	5.69E+14
Te-131m	1.83E+16	1.21E+15	2.02E+15	4.14E+14



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.3-38 of 1.3-265

Client PSEG Nuclear Development	Safety Related X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

Te-132	2.50E+17	1.82E+16	3.46E+16	9.98E+15
I-131	1.57E+17	6.68E+16	2.95E+16	2.27E+16
I-132	2.57E+17	1.88E+16	3.57E+16	1.03E+16
I-133	1.54E+17	5.41E+16	1.79E+16	6.78E+15
I-134	2.39E+09	5.68E+06	1.69E+03	7.19E-06
I-135	2.61E+16	5.72E+15	9.78E+14	6.56E+13
Xe-133	7.93E+18	2.58E+16	8.94E+15	7.06E+15
Xe-135	4.70E+17	1.83E+16	4.70E+15	7.74E+14
Cs-134	4.04E+16	1.05E+16	4.17E+15	1.36E+15
Cs-136	1.05E+16	2.69E+15	1.04E+15	3.23E+14
Cs-137	2.30E+16	6.01E+15	2.38E+15	7.76E+14
Ba-139	1.13E+12	1.00E+09	7.91E+06	8.87E-02
Ba-140	1.68E+17	4.07E+15	3.31E+15	6.67E+12
La-140	5.86E+16	1.72E+15	1.77E+15	4.81E+12
La-141	1.31E+13	2.30E+10	9.98E+10	2.84E+06
La-142	1.86E+10	5.38E+06	1.86E+06	7.18E-02
Ce-141	2.65E+15	2.50E+13	3.36E+15	6.66E+12
Ce-143	1.50E+15	1.24E+13	1.38E+15	1.68E+12
Ce-144	2.18E+15	2.07E+13	2.81E+15	5.66E+12
Pr-143	8.58E+14	5.30E+12	2.66E+14	6.21E+11
Nd-147	3.35E+14	1.85E+12	4.01E+13	7.60E+10
Np-239	2.57E+16	2.26E+14	2.73E+16	4.11E+13
Pu-238	9.94E+12	9.45E+10	1.28E+13	2.59E+10
Pu-239	7.53E+11	7.17E+09	9.72E+11	1.97E+09
Pu-240	1.18E+12	1.12E+10	1.52E+12	3.07E+09
Pu-241	2.61E+14	2.48E+12	3.36E+14	6.80E+11
Am-241	1.17E+11	6.64E+08	1.69E+10	3.72E+07
Cm-242	2.86E+13	1.60E+11	3.56E+12	7.16E+09
Cm-244	3.49E+12	1.96E+10	4.36E+11	8.80E+08

***** BEGINNING OF CHANGE CASE 4 USER INPUT *****

*

 * SOURCE TERM NUMBER 5 OF 6



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

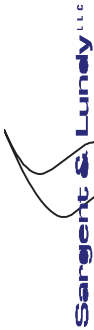
Page 1.3-39 of 1.3-265

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

```

*
263 RDATNAM2001 'RC5' * SOURCE TITLE
***** RECORD NUMBER 263 REPLACES RECORD NUMBER 211 *****
264 RDOALARM001 1.16E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE
***** RECORD NUMBER 264 REPLACES RECORD NUMBER 212 *****
* ALARM IS INITIATED
265 RDNUMREL001 4 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 265 REPLACES RECORD NUMBER 213 *****
266 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 266 REPLACES RECORD NUMBER 214 *****
267 RDREFTIM001 0.5 0.5 0.5 * REPRESENTATIVE TIME POINT FOR
***** RECORD NUMBER 267 REPLACES RECORD NUMBER 215 *****
* DISPERSION
* AND RADIOACTIVE DECAY (MIDPOINT)
268 RDPLHEAT001 0.0 0.0 0.0 0.0 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 268 REPLACES RECORD NUMBER 216 *****
269 RDPLHITE001 0.0 0.0 0.0 0.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 269 REPLACES RECORD NUMBER 217 *****
270 RDPLIUDUR001 1.01E+04 3.60E+04 3.60E+04 3.60E+04 * DURATION OF PLUMES
***** RECORD NUMBER 270 REPLACES RECORD NUMBER 218 *****
271 RDPDELAY001 1.89E+05 1.99E+05 2.59E+05 3.42E+05 * TIME OF RELEASE FOR EACH PLUME
***** RECORD NUMBER 271 REPLACES RECORD NUMBER 219 *****
* (SECONDS FROM SCRAM)
*
272 RDRELFRC001 9.28E-01 2.72E-03 1.06E-03 6.42E-03 8.05E-05 9.95E-05 2.99E-05 1.87E-05 6.61E-06
***** RECORD NUMBER 272 REPLACES RECORD NUMBER 220 *****
273 RDRELFRC002 3.53E-02 2.23E-02 4.21E-03 2.53E-03 1.45E-06 1.92E-06 5.29E-07 3.42E-07 1.60E-06
***** RECORD NUMBER 273 REPLACES RECORD NUMBER 221 *****
274 RDRELFRC003 1.83E-02 6.02E-02 8.03E-03 3.11E-03 5.15E-07 1.70E-06 5.69E-08 4.62E-08 1.30E-06
***** RECORD NUMBER 274 REPLACES RECORD NUMBER 222 *****
275 RDRELFRC004 6.47E-03 5.72E-02 6.42E-03 4.56E-03 1.64E-06 9.22E-07 2.10E-09 1.29E-08 3.67E-06
***** RECORD NUMBER 275 REPLACES RECORD NUMBER 223 *****

```



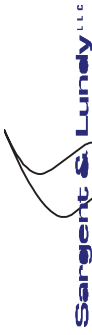
Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 4 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 4
 NUMBER OF RECORDS CHANGED = 13
 NUMBER OF RECORDS ADDED = 0

WARNING: plume # 2 overlaps preceding plume

RELEASED INVENTORY OF ALL PLUMES		
Co-60	1.57E+12	3.02E+10
Kr-85	5.84E+16	2.22E+15
Kr-85m	2.49E+14	3.54E+12
Kr-87	3.46E+05	4.07E+02
Kr-88	5.41E+12	4.34E+10
Rb-86	1.20E+13	4.73E+13
Sr-89	3.21E+14	5.75E+12
Sr-90	4.05E+13	7.30E+11
Sr-91	8.05E+12	9.11E+10
Sr-92	4.60E+08	1.62E+06
Y-90	2.68E+13	4.97E+11
Y-91	1.56E+14	2.76E+12
Y-92	4.09E+10	2.13E+08
Y-93	4.82E+12	5.50E+10
Zr-95	2.23E+14	3.94E+12
Zr-97	2.55E+13	3.47E+11
Nb-95	2.31E+14	4.08E+12
Mo-99	4.74E+14	8.56E+12
Tc-99m	4.57E+14	8.25E+12
Ru-103	6.72E+14	1.29E+13
Ru-105	1.08E+11	7.68E+08
		5.04E+07
		1.45E+10
		4.07E+14
		1.39E+09
		2.95E-08
		4.90E+05
		6.78E+13
		6.36E+12
		8.25E+11
		5.68E+09
		7.10E+01
		5.46E+11
		3.35E+10
		9.30E+04
		1.43E+07
		1.54E+10
		2.70E+08
		1.62E+10
		2.71E+12
		2.61E+12
		6.02E+12
		7.47E+05



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.3-41 of 1.3-265

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

	Safety Related	X	Non-Safety Related		
Equip. No.					
Ru-106	2.71E+14	5.22E+12	4.61E+12	2.50E+12	
Rh-105	1.82E+14	3.09E+12	1.98E+12	6.82E+11	
Sb-127	2.12E+15	7.98E+14	8.66E+14	1.07E+15	
Sb-129	1.65E+12	2.33E+11	1.98E+10	7.17E+08	
Te-127	2.36E+15	8.93E+14	9.92E+14	1.27E+15	
Te-127m	4.21E+14	1.66E+14	2.04E+14	2.98E+14	
Te-129	8.65E+14	3.39E+14	4.10E+14	5.89E+14	
Te-129m	1.33E+15	5.20E+14	6.30E+14	9.05E+14	
Te-131m	1.20E+15	4.09E+14	3.42E+14	2.95E+14	
Te-132	2.52E+16	9.38E+15	9.95E+15	1.19E+16	
I-131	1.04E+16	8.05E+16	2.05E+17	1.79E+17	
I-132	2.60E+16	9.67E+15	1.03E+16	1.23E+16	
I-133	4.06E+15	2.69E+16	4.17E+16	1.84E+16	
I-134	8.29E-03	4.40E-04	2.25E-09	2.58E-17	
I-135	8.02E+13	3.37E+14	1.58E+14	1.34E+13	
Xe-133	6.23E+18	2.51E+17	1.68E+17	8.71E+16	
Xe-135	3.95E+16	4.41E+15	3.00E+15	5.06E+14	
Cs-134	1.30E+15	5.16E+15	9.83E+15	7.86E+15	
Cs-136	3.15E+14	1.23E+15	2.27E+15	1.72E+15	
Cs-137	7.41E+14	2.94E+15	5.61E+15	4.49E+15	
Ba-139	8.92E+02	8.75E-01	1.63E-04	4.24E-09	
Ba-140	4.52E+14	1.08E+13	8.44E+12	2.26E+13	
La-140	3.84E+14	8.89E+12	6.77E+12	2.02E+13	
La-141	1.62E+10	9.31E+07	5.30E+05	3.35E+02	
La-142	6.27E+03	6.32E+00	3.78E-04	4.39E-10	
Ce-141	1.32E+14	2.41E+12	3.20E+11	8.70E+10	
Ce-143	4.06E+13	6.49E+11	6.18E+10	1.06E+10	
Ce-144	1.11E+14	2.02E+12	2.73E+11	7.61E+10	
Pr-143	1.85E+14	3.24E+12	3.43E+11	1.80E+10	
Nd-147	7.65E+13	1.33E+12	1.37E+11	4.76E+09	
Np-239	9.07E+14	1.53E+13	1.69E+12	3.56E+11	
Pu-238	5.07E+11	9.27E+09	1.25E+09	3.49E+08	
Pu-239	3.85E+10	7.04E+08	9.52E+07	2.66E+07	
Pu-240	6.00E+10	1.10E+09	1.48E+08	4.14E+07	
Pu-241	1.33E+13	2.43E+11	3.28E+10	9.16E+09	



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-42 of 1.3-265

Client PSEG Nuclear Development	Safety Related X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

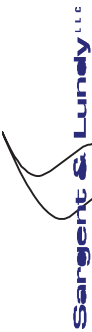
Am-241 2.88E+10 5.10E+08 5.50E+07 2.18E+06
 Cm-242 7.03E+12 1.24E+11 1.33E+10 4.90E+08
 Cm-244 8.63E+11 1.53E+10 1.64E+09 6.06E+07

***** BEGINNING OF CHANGE CASE 5 USER INPUT *****
 *

 * SOURCE TERM NUMBER 6 OF 6

276	RDATNAM2001	'RC6'	* SOURCE TITLE
*****	RECORD NUMBER	276 REPLACES RECORD NUMBER	211 *****
277	RDOALARM001	1.80E+03	* TIME AFTER ACCIDENT INITIATION THAT OFF-SITE
*****	RECORD NUMBER	277 REPLACES RECORD NUMBER	212 *****
			ALARM IS INITIATED
278	RDNUMREL001	4	* NUMBER OF PLUMES MODELED
*****	RECORD NUMBER	278 REPLACES RECORD NUMBER	213 *****
279	RDMAXRIS001	1	* RISK-DOMINANT PLUME
*****	RECORD NUMBER	279 REPLACES RECORD NUMBER	214 *****
280	RDREFTIM001	0.5 0.5 0.5 0.5	* REPRESENTATIVE TIME POINT FOR
*****	RECORD NUMBER	280 REPLACES RECORD NUMBER	215 *****
			DISPERSION
			AND RADIOACTIVE DECAY (MIDPOINT)
281	RDPLHEAT001	0.0 0.0 0.0 0.0	* HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
*****	RECORD NUMBER	281 REPLACES RECORD NUMBER	216 *****
282	RDPLHITE001	0.0 0.0 0.0	* RELEASE HEIGHT OF EACH PLUME (METERS)
*****	RECORD NUMBER	282 REPLACES RECORD NUMBER	217 *****
283	RDPLUDUR001	1.37E+04 3.60E+04 3.60E+04 3.60E+04	* DURATION OF PLUMES
*****	RECORD NUMBER	283 REPLACES RECORD NUMBER	218 *****
284	RDPELAY001	1.27E+03 1.49E+04 8.77E+04 1.74E+05	* TIME OF RELEASE FOR EACH PLUME
*****	RECORD NUMBER	284 REPLACES RECORD NUMBER	219 *****
			(SECONDS FROM SCRAM)

Xe/Kr I Cs Te Sr Ru La Ce Ba



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page	1.3-43	of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

```

285 RDRELFRC001 1.24E-04 1.68E-06 1.66E-06 1.30E-06 1.55E-07 6.31E-07 3.19E-09 5.31E-09 2.44E-07
***** RECORD NUMBER 285 REPLACES RECORD NUMBER 220 *****
286 RDRELFRC002 6.54E-04 1.46E-09 0.00E+0 6.96E-09 1.79E-08 6.46E-09 2.88E-10 2.76E-10 2.45E-08
***** RECORD NUMBER 286 REPLACES RECORD NUMBER 221 *****
287 RDRELFRC003 6.90E-04 1.86E-09 0.00E+0 5.08E-10 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0
***** RECORD NUMBER 287 REPLACES RECORD NUMBER 222 *****
288 RDRELFRC004 6.45E-04 0.00E+0 0.00E+0 8.88E-11 6.46E-11 4.43E-11 4.55E-13 1.23E-12 6.38E-11
***** RECORD NUMBER 288 REPLACES RECORD NUMBER 223 *****

```

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 5 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 5
NUMBER OF RECORDS CHANGED = 13
NUMBER OF RECORDS ADDED = 0

WARNING: plume # 2 overlaps preceding plume

RELEASED INVENTORY OF ALL PLUMES

Co-60	9.95E+09	1.02E+08	0.00E+00	6.98E+05
Kr-85	7.80E+12	4.11E+13	4.34E+13	4.06E+13
Kr-85m	9.84E+13	1.79E+14	8.26E+12	1.89E+11
Kr-87	7.77E+13	9.62E+12	1.66E+08	3.28E+02
Kr-88	2.15E+14	2.12E+14	1.61E+12	4.32E+09
Rb-86	2.04E+10	0.00E+00	0.00E+00	0.00E+00
Sr-89	6.36E+11	7.31E+10	0.00E+00	2.57E+08
Sr-90	7.80E+10	9.01E+09	0.00E+00	3.25E+07
Sr-91	6.71E+11	4.69E+10	0.00E+00	6.73E+06
Sr-92	4.83E+11	9.59E+09	0.00E+00	4.27E+02
Y-90	3.54E+09	9.88E+08	0.00E+00	1.44E+07
Y-91	1.73E+10	1.65E+09	0.00E+00	3.27E+06



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.3-44 of 1.3-265

Client PSEG Nuclear Development	Safety Related	Non-Safety Related
Project PSEG ESPA	X	
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

Y-92	2.40E+11	2.31E+10	0.00E+00	3.28E+04
Y-93	1.78E+10	1.00E+09	0.00E+00	7.62E+04
Zr-95	2.44E+10	2.20E+09	0.00E+00	3.40E+06
Zr-97	2.26E+10	1.54E+09	0.00E+00	3.97E+05
Nb-95	2.47E+10	2.23E+09	0.00E+00	3.51E+06
Mo-99	5.18E+12	4.93E+10	0.00E+00	2.13E+08
Tc-99m	4.63E+12	4.59E+10	0.00E+00	2.05E+08
Ru-103	4.43E+12	4.51E+10	0.00E+00	2.99E+08
Ru-105	2.17E+12	7.58E+09	0.00E+00	5.24E+04
Ru-106	1.72E+12	1.76E+10	0.00E+00	1.20E+08
Rh-105	2.86E+12	2.73E+10	0.00E+00	8.18E+07
Sb-127	6.34E+11	3.22E+09	2.02E+08	2.95E+07
Sb-129	1.32E+12	2.35E+09	6.68E+06	2.49E+04
Te-127	6.35E+11	3.31E+09	2.16E+08	3.27E+07
Te-127m	8.52E+10	4.56E+08	3.33E+07	5.82E+06
Te-129	1.50E+12	3.45E+09	7.68E+07	1.20E+07
Te-129m	2.79E+11	1.49E+09	1.07E+08	1.84E+07
Te-131m	8.04E+11	3.67E+09	1.68E+08	1.69E+07
Te-132	8.06E+12	4.06E+10	2.48E+09	3.50E+08
I-131	7.47E+12	6.43E+09	7.51E+09	4.42E+06
I-132	9.49E+12	3.96E+10	2.55E+09	3.61E+08
I-133	1.40E+13	9.68E+09	6.29E+09	0.00E+00
I-134	2.78E+12	1.05E+07	1.52E+00	0.00E+00
I-135	1.11E+13	4.70E+09	7.19E+08	0.00E+00
Xe-133	1.11E+15	5.61E+15	5.30E+15	4.34E+15
Xe-135	2.68E+14	8.31E+14	1.87E+14	2.82E+13
Cs-134	2.04E+12	0.00E+00	0.00E+00	0.00E+00
Cs-136	5.53E+11	0.00E+00	0.00E+00	0.00E+00
Cs-137	1.16E+12	0.00E+00	0.00E+00	0.00E+00
Ba-139	6.27E+11	1.98E+09	0.00E+00	1.15E-03
Ba-140	1.88E+12	1.86E+11	0.00E+00	4.37E+08
La-140	9.64E+10	2.93E+10	0.00E+00	2.78E+08
La-141	1.56E+10	4.19E+08	0.00E+00	2.73E+02
La-142	8.13E+09	3.33E+07	0.00E+00	1.23E-04
Ce-141	3.91E+10	2.02E+09	0.00E+00	8.65E+06



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-45 of 1.3-265

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Ce-143	3.41E+10	1.53E+09	0.00E+00	2.70E+06
Ce-144	3.16E+10	1.64E+09	0.00E+00	7.29E+06
Pr-143	2.12E+10	1.90E+09	0.00E+00	3.22E+06
Nd-147	9.35E+09	8.29E+08	0.00E+00	1.17E+06
Np-239	4.85E+11	2.32E+10	0.00E+00	6.01E+07
Pu-238	1.44E+08	7.48E+06	0.00E+00	3.33E+04
Pu-239	1.09E+07	5.65E+05	0.00E+00	2.53E+03
Pu-240	1.70E+07	8.85E+05	0.00E+00	3.95E+03
Pu-241	3.77E+09	1.96E+08	0.00E+00	8.74E+05
Am-241	3.06E+06	2.76E+05	0.00E+00	4.45E+02
Cm-242	7.57E+08	6.83E+07	0.00E+00	1.07E+05
Cm-244	9.21E+07	8.31E+06	0.00E+00	1.31E+04

USER INPUT IS READ FROM UNIT 25
 RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.
 THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
 THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

RECORD
 NUMBER

 * FILE NAME: E.2.INP
 *
 * Sargent & Lundy (10/2009)
 *

 * DOSE CONVERSION FILE DATA

 *
 *DOSE CONVERSION FACTOR FILENAME
 1 DCF_FILE001 'C:\MACCS2\DOSDATA.INP'
 *

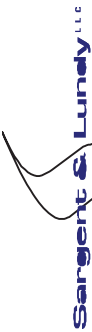


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.3-46	of 1.3-265
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

* MISCELLANEOUS DATA
*
* *****
2 DESCRIPTIVE TITLE DESCRIBING THIS "EARLY" INPUT FILE
*
3 MIEANAM1001 'GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS'
*
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
* FALSE ASSIGNED BECAUSE CHRONC IS TO BE RUN AFTER EARLY
*
4 MIENDAT2001 .FALSE.
*
* DISPERSION MODEL OPTION CODE:
* USER'S GUIDE APPENDIC C/NUREG 4551 APPENDIX A
*
* 1 * STRAIGHT LINE
* 2 * WIND-SHIFT WITH ROTATION
* 3 * WIND-SHIFT WITHOUT ROTATION
*
5 MIIPLUME001 2
*
* NUMBER OF FINE GRID SUBDIVISIONS USED BY THE MODEL
* 3, 5 OR 7 ALLOWED
*
6 MINUMFIN001 7
*
* LEVEL OF DEBUG OUTPUT REQUIRED, NORMAL RUNS SHOULD SPECIFY ZERO (MINIMUM DEBUG OUTPUT)
*
7 MIIPRINT001 0
*
* LOGICAL FLAG SIGNIFYING THAT THE RISK CONTRIBUTION TABLES ARE NOT TO BE PRINTED
* RISBIN
*
8 MIRISCAT001 .FALSE.
*
* FLAG INDICATING WIND-ROSES FROM ATMOS ARE TO USED
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.3-47 of 1.3-265
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

9 MIOVRRID001 .FALSE.
*
* *****
* ORGAN DEFINITION (OD) DATA
* *****
*
* ORGANS TO BE USED FOR HEALTH EFFECTS
*
*      ORGNAM      ORGFLG
*
10 MIORGDEF001 'A-SKIN'      .TRUE.
11 MIORGDEF002 'A-RED MARR'    .TRUE.
12 MIORGDEF003 'A-LUNGS'     .TRUE.
13 MIORGDEF004 'A-THYROIDH'  .TRUE.
14 MIORGDEF005 'A-STOMACH'   .TRUE.
15 MIORGDEF006 'A-LOWER LI'   .TRUE.
16 MIORGDEF007 'L-EDEWBODY'  .TRUE.
17 MIORGDEF008 'L-RED MARR'    .TRUE.
18 MIORGDEF009 'L-BONE SUR'    .TRUE.
19 MIORGDEF010 'L-BREAST'     .TRUE.
20 MIORGDEF011 'L-LUNGS'      .TRUE.
21 MIORGDEF012 'L-THYROID'   .TRUE.
22 MIORGDEF013 'L-LOWER LI'   .TRUE.
23 MIORGDEF014 'L-BLAD WAL'   .TRUE.
24 MIORGDEF015 'L-LIVER'     .TRUE.
25 MIORGDEF016 'L-THYROIDH'  .TRUE.
*
* *****
* POPULATION DISTRIBUTION (PD) DATA
* *****
*
* FLAG INDICATES THAT THE POPULATION DATA IS PROVIDED IN A SEPARATE FILE
*
26 PDPOFFLG001 FILE
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Page	1.3-48 of 1.3-265
Project PSEG ESPA		Prepared by	Date
Proj. No 12380-001		Reviewed by	Date
Equip. No.		Approved by	Date

 * SHIELDING AND EXPOSURE (SE) DATA

 *
 * THREE VALUES OF EACH PROTECTION FACTOR ARE SUPPLIED,
 * ONE FOR EACH TYPE OF ACTIVITY:
 *
 * ACTIVITY TYPE:
 * 1 - EVACUEES WHILE MOVING
 * 2 - NORMAL ACTIVITY IN SHELTERING AND EVACUATION ZONE
 * 3 - SHELTERED ACTIVITY
 *
 * CLOUD SHIELDING FACTORS
 *
 * EVACUEES NORMAL SHELTER
 27 SECSFACT001 1. 0.75 0.6
 *
 * PROTECTION FACTORS FOR INHALATION
 *
 * EVACUEES NORMAL SHELTER
 28 SEPROTIN001 1. 0.41 0.33
 *
 * BREATHING RATES (CUBIC METERS PER SECOND)
 *
 * EVACUEES NORMAL SHELTER
 29 SEBRRATE001 2.66E-4 2.66E-4 2.66E-4
 *
 * SKIN PROTECTION FACTORS
 *
 * EVACUEES NORMAL SHELTER
 30 SESKPFAC001 1.0 0.41 0.33
 *
 * GROUND SHIELDING FACTORS
 *
 * EVACUEES NORMAL SHELTER
 *



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.3-49	of 1.3-265
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

31 SEGSHFAC001 0.5 0.33 0.2
*
* RESUSPENSION INHALATION MODEL CONCENTRATION COEFFICIENT (SEC/METER)
*
32 SERESCON001 1.E-4
*
* RESUSPENSION CONCENTRATION COEFFICIENT HALF-LIFE (SEC)
*
33 SERESHAF001 1.82E5
*
*****
* EVACUATION ZONE DATA BLOCK
*****
*
* SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
*
34 EZEANAM2001 '95% EVACUATION'
*
* THE TYPE OF WEIGHTING TO BE APPLIED TO THE EMERGENCY RESPONSE SCENARIOS
* (A VALUE OF 'TIME' OR 'PEOPLE')
*
35 EZWTNAME001 'PEOPLE'
*
* WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO
* 95% OF PEOPLE EVACUATED
*
36 EZWTFRAC001 0.95
*
* LAST RING IN THE MOVEMENT ZONE
* (RING 6 CORRESPONDS TO 60 MILES - NO EXPOSURE AFTER TRAVELING TO 10 MILES)
*
37 EZLASM0V001 6
*
* FLAG DEFINING THE TIME AT WHICH EVACUEES "ENTER" THE DESTINATION ELEMENT
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

38	TRAVELPOINT	'BOUNDARY'
*	*	
*	*	RADIAL EVACUATION SPEED (M/S), SPEED TO EXIT EPZ ONCE TRAVEL BEGINS
*	*	95 MIN TRAVEL TIME TO CLEAR EPZ (10 MILES)
*	*	
39	EZESPEED001	2.8 2.8 2.8
*	*	
*	*	EVACUATION IS BASED ON A RADIAL EVACUATION
*	*	
40	EZEVA001	'RADIAL'
*	*	
*	*	THE DURATION (SECONDS) OF THE EARLY PHASE OF EVACUATION (1440 HOURS)
*	*	
41	EZDURBEG001	86400.0
*	*	
*	*	THE DURATION (SECONDS) OF THE MIDDLE PHASE OF EVACUATION
*	*	
42	EZDURMID001	0.0
*	*	
*	*	CONTROL FLAG INDICATING THAT THE INITIATION OF SHELTERING AND
*	*	EVACUATION ACTIONS WILL OCCUR AT THE OFF-SITE ALARM TIME (ATMOS INPUT VARIABLE)
*	*	
43	EZREFPNT001	'ALARM'
*	*	
*	*	THE NUMBER OF CONCENTRIC RINGS IN WHICH EVACUATION AND/OR SHELTERING CAN OCCUR FOR
*	*	THE RESIDENT POPULATION
*	*	
44	EZNUMEVA001	6
*	*	
*	*	FOR EACH DISTANCE RING IN THE SHELTER/EVACUATION REGION - THE DELAY TO TAKE SHELTER
*	*	(SECONDS) FOR RESIDENT INDIVIDUALS (65 MIN DELAY)
*	*	
45	EZDLTSHL001	3900. 3900. 3900. 3900. 3900.
*	*	
*	*	DELAY FROM SHELTER TO EVAC



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-51 of 1.3-265

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

```

*
46 EZDLTEVA001 0. 0. 0. 0. 0. 0.
*
*****
* SHELTER AND RELOCATION (SR) ZONE DATA
*****
*
* DURATION OF THE EMERGENCY PHASE (SECONDS FROM PLUME ARRIVAL)
* (ONE WEEK)
*
47 SRENDEMP001 604800.
*
* CRITICAL ORGAN FOR RELOCATION DECISIONS
* NUREGR 4551, APPENDIX A and HC ER
* EDEWBODY - EFFECTIVE WHOLE-BODY DOSE EQUIVALENT
*
48 SRCRIORG001 'L-EDEWBODY'
*
* HOT SPOT RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
* ONE-HALF DAY, NUREGR 4551, APPENDIX A
*
49 SRTIMHOT001 43200.
*
* NORMAL RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
* ONE DAY, NUREGR 4551, APPENDIX A and HC ER
*
50 SRTIMNRM001 86400.
*
* HOT SPOT RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
* (1 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)
* HC ER
*
51 SRDOSHOT001 0.01
*
* NORMAL RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* (1 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)

* HC ER

* SRDOSNRM001 0.01

 * EARLY FATALITY (DF) DATA

* NUMBER OF EARLY FATALITY EFFECTS

* HC ER

53 EFNUMEFA001 3

	ORGNAM	EFFACA	EFFACB	EFFTHR
54 EFATAGRP001 'A-RED MARR'	3.8	5.0	1.5	
55 EFATAGRP002 'A-LUNGS'	10.0	7.0	5.0	
56 EFATAGRP003 'A-LOWER LI'	15.0	10.0	8.0	

 * EARLY INJURY MODEL PARAMETERS

* NUMBER OF EARLY INJURY EFFECTS

57 EINUMEIN001 0

 * LATENT CANCER (LC) PARAMETERS

* NUMBER OF LATENT CANCER EFFECTS

58 LCNUMACA001 7



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.3-53 of 1.3-265
Non-Safety Related		Prepared by	Date
Client PSEG Nuclear Development		Reviewed by	Date
Project PSEG ESPA		Approved by	Date
Proj. No 12380-001		Equip. No.	

* * THRESHOLD DOSE FOR APPLYING THE DOSE DEPENDENT REDUCTION FACTOR

* * * LCDDTHRE001 0.2 (20 REM, BELOW WHICH DDREFA WILL BE APPLIED)

* * DOSE THRESHOLD FOR LINEAR DOSE RESPONSE (SV)

* * LINEAR MODEL (QUADRATIC MODEL IS NOT BEING USED)

* * * LCACTHRE001 0.0

ACNAME	ORGNAM	ACSUSC	DOSEFA	DOSEFB	CFRISK	CIRISK	DDREFA
LCANCERS001 'LEUKEMIA'	'L-RED MARR'	1.0	1.0	0.0	9.70E-3	0.0	2.0
LCANCERS002 'BONE'	'L-BONE SUR'	1.0	1.0	0.0	1.20E-4	0.0	2.0
LCANCERS003 'BREAST'	'L-BREAST'	1.0	1.0	0.0	5.40E-3	1.7E-2	1.0
LCANCERS004 'LUNG'	'L-LUNGS'	1.0	1.0	0.0	1.55E-2	0.0	2.0
LCANCERS005 'THYROID'	'L-THYROIDH'	1.0	1.0	0.0	7.20E-4	7.2E-3	1.0
LCANCERS006 'GI'	'L-LOWER LI'	1.0	1.0	0.0	3.36E-2	0.0	2.0
LCANCERS007 'OTHER'	'L-EDEWBODY'	1.0	1.0	0.0	2.76E-2	0.0	2.0

* * * * * RESULT 1 - TOTAL NUMBER OF A GIVEN EFFECT (LATENT CANCER, EARLY DEATH)

* * * * * NUMBER OF DESIRED RESULTS OF THIS TYPE

TYPE1NUMBER	5	NAME	I1DIS1	I2DIS1
TYPE1OUT001	'CAN FAT/TOTAL'	1	10	* 0 to 50 miles
TYPE1OUT002	'CAN FAT/TOTAL'	1	6	* 0 to 10 miles
TYPE1OUT003	'ERL FAT/TOTAL'	1	10	* 0 to 50 miles
TYPE1OUT004	'ERL FAT/TOTAL'	1	2	* 0 to 2 miles
TYPE1OUT005	'ERL FAT/TOTAL'	1	1	* 0 to 1 miles



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

*

 * RESULT 2 - FURTHEST DISTANCE AT WHICH A GIVEN RISK OF EARLY DEATH IS EXCEEDED

* NUMBER OF DESIRED RESULTS OF THIS TYPE

74 TYPE2NUMBER 0

*

 * RESULT 3 - POPULATION EXCEEDING A DOSE THRESHOLD

* NUMBER OF DESIRED RESULTS OF THIS TYPE

75 TYPE3NUMBER 2

76 TYPE3OUT001 'L-EDEWBODY' 2.0 * 2 Sv = 200 rem
 77 TYPE3OUT002 'L-EDEWBODY' 0.25 * 0.25 Sv = 25 rem

*

 * RESULT 4 - AVERAGE INDIVIDUAL RISK

* NUMBER OF DESIRED RESULTS OF THIS TYPE

78 TYPE4NUMBER 0

*

 * RESULT 5 - POPULATION DOSE

* NUMBER OF DESIRED RESULTS OF THIS TYPE

79 TYPE5NUMBER 2



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.3-55 of 1.3-265

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date

```

*
*      NAME      I1DIS5 I2DIS5
*
80 TYPE5OUT001 'L-EDEWBODY' 1 6 * 0 to 10 miles
81 TYPE5OUT002 'L-EDEWBODY' 1 10 * 0 to 50 miles
*
*****
* RESULT 6 - CENTERLINE DOSE VS. DISTANCE
*****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
82 TYPE6NUMBER 0
*
*****
* RESULT 7 - CENTERLINE RISK VS. DISTANCE
*****
*
* TYPE7NUMBER 0
*
*****
* RESULT 8 - POPULATION-WEIGHTED RISK
*****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
84 TYPE8NUMBER 6
*
*      NAME      I1DIS8 I2DIS8
*
85 TYPE8OUT001 'ERL FAT/TOTAL' 1 10 *0-50 MILES
86 TYPE8OUT002 'ERL FAT/TOTAL' 1 2 *0- 2 MILES
87 TYPE8OUT003 'ERL FAT/TOTAL' 1 1 *0- 1 MILES
88 TYPE8OUT004 'ERL FAT/TOTAL' 3 3 *2- 3 MILES
89 TYPE8OUT005 'CAN FAT/TOTAL' 1 10 *0-50 MILES

```



Calcs. For ENVIRONMENTAL CONSEQUENCE ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222 Rev. 2 Date Page 1.3-56 of 1.3-265

Table with 3 columns: Client (PSEG Nuclear Development), Project (PSEG ESPA), Proj. No (12380-001), and various approval fields (Safety Related, Non-Safety Related, Prepared by, Reviewed by, Approved by).

90 TYPE8OUT006 'CAN FAT/TOTAL' 1 6 *0-10 MILES

* RESULT A - PEAK DOSE AT A DISTANCE

* TYPEANUMBER 1

* NAME I1DISA I2DISA 1 1 CCDF

92 TYPEAOUT001 'L-EDEWBODY' 1 1

* RESULT B - PEAK DOSE AT AN (r, theta) LOCATION

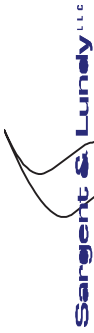
* TYPEBNUMBER 0

* TERMINATOR CARD

***** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT *****

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ = 386
NUMBER OF BLANK OR COMMENT RECORDS READ = 292
NUMBER OF TERMINATOR RECORDS = 1
NUMBER OF RECORDS PROCESSED = 93
NUMBER OF PROCESSED RECORDS DUPLICATED = 0
NUMBER OF PROCESSED RECORDS SORTED = 93



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

The list of defined organs is as follows (A- is ACUTE and L- is LIFETIME):

- A-SKIN
- A-RED MARR
- A-LUNGS
- A-THYROIDH
- A-STOMACH
- A-LOWER LI
- L-EDEWBODY
- L-RED MARR
- L-BONE SUR
- L-BREAST
- L-LUNGS
- L-THYROID
- L-LOWER LI
- L-BLAD WAL
- L-LIVER
- L-THYROIDH

Am using a DOSFAC/DOSFAC2/IDCF2 dose factor file

READING FROM A DOSE CONVERSION FILE WITH THE FOLLOWING HEADER:
 MACCS File DOSDATA.INP: Changed by D. CHANIN25-JUN-92, 09:53:47
 Seven new organs added with MACCS Version 1.5.11.1

USING THE FOLLOWING SITE DATA FILE:

MACCS2 SITE FILE FOR PSEG ESPA
 Originator: G. Teagarden (7/14/2008) - Population Updated by S&L 10/2009
 10 SPATIAL INTERVALS
 16 WIND DIRECTIONS
 7 CROP CATEGORIES



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA			Rev.	2
			Date	
Safety Related	X	Non-Safety Related	Page	1.3-58 of 1.3-265
Client		PSEG Nuclear Development		
Project		PSEG ESPA		
Proj. No	12380-001	Equip. No.		
Prepared by		Date		
Reviewed by		Date		
Approved by		Date		

4 WATER PATHWAY ISOTOPES									
2 WATERSHEDS									
63 ECONOMIC REGIONS									
SPATIAL DISTANCES	KILOMETERS								
1.6093	3.2187	6.4374	8.0467	16.0935	32.1869	48.2804			
4.8280	4.8280								
64.3739	80.4674								
POPULATION									
0.	0.	0.	170.	362.	200986.	177866.			
448847.	363839.								
0.	0.	5.	50.	8729.	27634.	187239.			
951522.	1053252.								
0.	0.	2.	67.	5174.	14923.	171366.			
696849.	709835.								
0.	0.	19.	50.	312.	7485.	79517.			
168204.	78672.								
0.	0.	14.	47.	42.	1631.	37292.	107168.		
41884.	87062.								
0.	0.	0.	0.	4.	539.	28321.	34813.		
14908.	28408.								
0.	0.	0.	0.	0.	9.	135.	895.		
56.	47396.								
0.	0.	0.	0.	10.	256.	2592.			
2693.	19048.								
0.	0.	0.	0.	5.	190.	23209.	136055.		
62733.	54529.								
0.	0.	0.	6.	9.	828.	33333.	26456.		
26232.	39908.								
0.	0.	2.	9.	11.	2398.	6341.	12703.		
14398.	23676.								
0.	0.	2.	22.	208.	5766.	8588.	6352.		
18349.	32002.								
0.	0.	3.	181.	436.	19211.	15582.	15301.		
71710.	242510.								
0.	0.	70.	220.	373.	5284.	78925.	106793.		
90311.	37500.								



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-59 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related						
0.	0.		164.	227.	3551.	165975.	93291.		
74425.	67892.								
0.	0.		118.	37.	2432.	179067.	163291.		
220746.	138597.								

LAND FRACTION

1.00	0.95	0.30	0.25	0.25	0.40	0.75	0.92	0.99	1.00
1.00	1.00	0.93	0.97	1.00	0.95	0.95	0.85	0.95	0.99
1.00	1.00	0.99	0.96	0.95	0.99	0.99	0.99	0.98	0.98
1.00	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.95	0.95	0.97	1.00	1.00	1.00	0.99	0.98	1.00	0.99
0.03	0.25	0.50	0.65	0.75	1.00	0.98	0.99	0.92	0.95
0.01	0.00	0.00	0.00	0.00	0.33	0.35	0.30	0.03	0.40
0.01	0.00	0.00	0.00	0.00	0.03	0.50	0.25	0.35	0.40
0.01	0.00	0.03	0.45	0.60	0.97	0.99	0.99	0.99	0.99
0.01	0.00	0.45	0.97	0.92	1.00	1.00	1.00	1.00	0.99
0.01	0.00	0.50	0.92	0.95	0.98	1.00	0.98	0.97	0.75
0.01	0.00	0.45	0.92	0.92	0.99	0.97	0.93	0.75	0.25
0.01	0.00	0.15	0.92	0.92	0.99	0.93	0.40	0.80	0.90
0.01	0.00	0.00	0.70	0.97	0.99	0.93	0.90	0.90	0.90
0.15	0.00	0.01	0.25	0.85	0.99	1.00	1.00	1.00	0.99
0.95	0.30	0.01	0.10	0.35	0.75	0.90	1.00	1.00	0.99

REGION INDEX

1	2	2	2	2	4	5	6
1	2	2	2	2	7	8	9
1	2	2	2	210111213			
1	2	2	21415161718				
1	2	2	21920202122				
1	2	2	22320202422				
1	2	3	32626262627				
1	3	3	32826262930				
1	3	3	33132333435				
1	3	3	336373839				
1	3	3	340414243				
1	3	3	344454647				
1	3	3	348495051				



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No.	2009-11222
Rev.	2
Date	
Page	1.3-60 of 1.3-265

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

1 2 3 3 3 352535455
 1 2 3 3 3 3565758
 1 2 2 2 35960616263

WATERSHED INDEX

1 1 2 2 1 1 1 1 1
 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1
 2 2 1 1 1 1 1 1 1
 2 2 2 2 2 2 2 2 1
 2 2 2 2 2 2 1 2 1 1
 2 2 2 2 1 1 1 1 1
 2 2 2 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1
 1 2 2 2 1 1 1 1 1

CROP SEASON AND SHARE

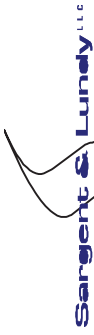
1 PASTURE	90. 270.	0.4100
2 STORED FORAGE	150. 240.	0.1300
3 GRAINS	150. 240.	0.2100
4 GRN LEAFY VEGETABLES	150. 240.	0.0020
5 OTHER FOOD CROPS	150. 240.	0.0040
6 LEGUMES AND SEEDS	150. 240.	0.1500
7 ROOTS AND TUBERS	150. 240.	0.0030

WATERSHED DEFINITION -- INITIAL AND ANNUAL WASHOFF AND INGESTION FACTORS

1 Sr-89	5.00E-06	0.0
2 Sr-90	5.00E-06	0.0
3 Cs-134	5.00E-06	0.0
4 Cs-137	5.00E-06	0.0

REGIONAL ECONOMIC DATA

01 EXCLUSION	0.45	0.090	1861.3	13673.7	235830.7
--------------	------	-------	--------	---------	----------



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.3-61 of 1.3-265

Client	PSEG Nuclear Development		Safety Related	X	Non-Safety Related
Project	PSEG ESPA				
Proj. No	12380-001		Equip. No.		

	0.45	0.090	1861.3	13673.7	235830.7	Date
	0.26	0.079	0948.0	19736.6	303569.3	Date
	0.20	0.037	2157.6	20444.1	277602.8	Date
	0.05	0.017	1958.8	18162.9	307006.4	Date
	0.13	0.100	1964.7	26183.0	351488.1	Date
	0.25	0.036	3144.9	26457.8	247747.7	Date
	0.12	0.013	2768.2	26733.3	250181.2	Date
	0.11	0.026	1981.1	22799.4	265861.5	Date
	0.44	0.086	1981.3	13740.5	233949.1	Date
	0.32	0.056	2672.0	21747.8	243357.2	Date
	0.16	0.016	3403.4	29136.5	253768.9	Date
	0.15	0.027	3187.8	23824.1	271205.3	Date
	0.43	0.083	2101.4	13807.3	232067.4	Date
	0.25	0.020	4021.7	14876.9	201961.4	Date
	0.29	0.035	3504.3	16494.4	215132.8	Date
	0.13	0.007	5595.6	19080.4	237336.0	Date
	0.09	0.003	6164.9	18356.6	245615.2	Date
	0.30	0.036	3541.6	14609.5	209487.9	Date
	0.23	0.012	4261.8	15010.6	198198.1	Date
	0.17	0.007	4389.2	16606.7	223788.3	Date
	0.07	0.000	4218.1	19155.6	265936.7	Date
	0.32	0.044	3301.6	14475.8	213251.2	Date
	0.19	0.009	3888.5	16201.6	218896.0	Date
	0.06	0.000	2768.8	19774.4	280989.8	Date
	0.49	0.088	1714.9	10388.2	200707.0	Date
	0.43	0.014	3906.0	13360.2	224540.9	Date
	0.38	0.084	1331.5	15062.4	252138.1	Date
	0.49	0.078	2062.6	10727.1	203341.3	Date
	0.47	0.023	3800.6	12421.5	216512.7	Date
	0.27	0.079	0986.4	19269.2	298426.2	Date
	0.46	0.087	1599.9	11790.5	216136.3	Date
	0.50	0.082	1767.9	10159.8	199201.7	Date
	0.52	0.063	1926.8	09474.5	194685.8	Date
	0.53	0.036	2423.0	09700.5	203968.5	Date
	0.40	0.103	1231.4	15426.4	272836.0	Date



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.3-62 of 1.3-265

Client	PSEG Nuclear Development		Safety Related	X	Non-Safety Related
Project	PSEG ESPA				
Proj. No	12380-001		Equip. No.		

	Prepared by	Date		Reviewed by	Date		Approved by	Date
37 SWS-20	0.63	0.085	1270.4	0.63	0.085	1270.4	0.63	0.085
38 SWS-30	0.63	0.064	1347.3	0.63	0.064	1347.3	0.63	0.064
39 SWS-40	0.63	0.064	1166.0	0.63	0.064	1166.0	0.63	0.064
40 SW-10	0.43	0.125	1256.5	0.43	0.125	1256.5	0.43	0.125
41 SW-20	0.65	0.171	1368.6	0.65	0.171	1368.6	0.65	0.171
42 SW-30	0.66	0.167	1334.9	0.66	0.167	1334.9	0.66	0.167
43 SW-40	0.64	0.187	1402.0	0.64	0.187	1402.0	0.64	0.187
44 WSW-10	0.32	0.089	1760.8	0.32	0.089	1760.8	0.32	0.089
45 WSW-20	0.39	0.123	1997.0	0.39	0.123	1997.0	0.39	0.123
46 WSW-30	0.33	0.313	0853.2	0.33	0.313	0853.2	0.33	0.313
47 WSW-40	0.23	0.201	1473.6	0.23	0.201	1473.6	0.23	0.201
48 W-10	0.31	0.088	1635.7	0.31	0.088	1635.7	0.31	0.088
49 CECIL	0.35	0.095	2198.4	0.35	0.095	2198.4	0.35	0.095
50 W-30	0.31	0.245	1284.0	0.31	0.245	1284.0	0.31	0.245
51 W-40	0.33	0.298	1003.5	0.33	0.298	1003.5	0.33	0.298
52 WNW-10	0.28	0.083	1260.6	0.28	0.083	1260.6	0.28	0.083
53 WNW-20	0.35	0.104	3199.1	0.35	0.104	3199.1	0.35	0.104
54 WNW-30	0.45	0.182	4643.1	0.45	0.182	4643.1	0.45	0.182
55 WNW-40	0.66	0.316	4437.0	0.66	0.316	4437.0	0.66	0.316
56 NW-20	0.32	0.107	3724.6	0.32	0.107	3724.6	0.32	0.107
57 NW-30	0.36	0.132	5511.6	0.36	0.132	5511.6	0.36	0.132
58 NW-40	0.52	0.230	5161.0	0.52	0.230	5161.0	0.52	0.230
59 NWN-5	0.41	0.088	1678.7	0.41	0.088	1678.7	0.41	0.088
60 NWN-10	0.31	0.082	1176.3	0.31	0.082	1176.3	0.31	0.082
61 NWN-20	0.23	0.072	2025.2	0.23	0.072	2025.2	0.23	0.072
62 NWN-30	0.30	0.107	4966.1	0.30	0.107	4966.1	0.30	0.107
63 NWN-40	0.33	0.128	5161.7	0.33	0.128	5161.7	0.33	0.128

END
 *234567890123456789012345678901234567890123456789012345678901234567890 - alignment

POPULATION

***** BEGINNING OF CHANGE CASE 1 USER INPUT *****

*



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-63 of 1.3-265

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

```

*****
* EMERGENCY RESPONSE SCENARIO NUMBER 2
*****
*
*
*EVACUATION ZONE DATA BLOCK
*****
*
* SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
*
94 EZEANAM2001 'NO EVACUATION'
***** RECORD NUMBER 94 REPLACES RECORD NUMBER 34 *****
*
* WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO
* 5% OF PEOPLE RELOCATED (NO EVACUATION)
*
95 EZWTFRAC001 0.05
***** RECORD NUMBER 95 REPLACES RECORD NUMBER 36 *****
*
* LAST RING IN THE MOVEMENT ZONE
* A ZERO TURNS OFF THE EVACUATION MODEL
*
96 EZLASM0V001 0
***** RECORD NUMBER 96 REPLACES RECORD NUMBER 37 *****
*
***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 1 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 1
NUMBER OF RECORDS CHANGED = 3
NUMBER OF RECORDS ADDED = 0
*****

```

NO EVACUATION REQUESTED



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

***** WARNING -- THE FOLLOWING RECORDS WERE NEVER ACCESSED *****

DESCRIPTIVE TITLE DESCRIBING THIS "EARLY" INPUT FILE

USER INPUT IS READ FROM UNIT 26
 RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.
 THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
 THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

RECORD
 NUMBER

RECORD

 * FILE NAME E.3.INP
 *
 * Sargent & Lundy (10/2009)
 *

 *
 *DESCRIPTIVE TITLE DESCRIBING THIS "CHRONC" INPUT FILE
 *
 1 CHCHNAME001 'GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS'
 *
 * ECONOMIC DATA USED: 2009 CPI, 2002 CENSUS OF AGRICULTURE, 2005 BEA & BLS DATA
 *

 * EMERGENCY RESPONSE COST DATA

 *
 * EMERGENCY PHASE - DAILY COST FOR PERSON RELOCATED (\$/PERSON-DAY)
 *
 2 CHEVACST001 53.19 * 27.00 * 1.97



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-65 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

```

*
* INTERMEDIATE PHASE - DAILY COST FOR PERSON RELOCATED ($/PERSON-DAY)
*
3 CHRELCST001 53.19 * 27.00 * 1.97
*
*****
* LONG TERM PROTECTIVE ACTION DATA
*****
*
4 DUR_INTPHAS 0.0 *(in seconds) (no intermediate phase)
*
* LONG-TERM PHASE DOSE PROJECTION PERIOD, THE DURATION OF THE EXPOSURE
* PERIOD OVER WHICH THE LONG-TERM DOSE CRITERION IS EVALUATED (SECONDS)
*
5 CHTMPACT001 1.58E8 * seconds (5 YEARS)
*
* DOSE CRITERION FOR INTERMEDIATE PHASE RELOCATION (Sv) (YEAR 0-0.5)
*
6 CHDSCRTI001 1.0E5 (NO INTERMEDIATE PHASE RELOCATION)
*
* DOSE CRITERION FOR LONG-TERM PHASE RELOCATION (Sv) * (YEAR 0.5-5)
*
7 CHDSCRLT001 0.03 (3 REM)
*
* CRITICAL ORGAN NAME FOR LONG-TERM ACTIONS
*
8 CHCRTOCR001 'L-EDEWBODY'
*
* LONG TERM EXPOSURE PERIOD
*
9 CHEXPTIM001 1.58E9 * (50 YEARS PER EPA STANDARD DEFAULT EXPONENTIAL FACTORS)
*
*****
* DECONTAMINATION PLAN DATA BLOCK
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.3-66 of 1.3-265	
Non-Safety Related		Prepared by	Date
Client PSEG Nuclear Development		Reviewed by	Date
Project PSEG ESPA	Approved by	Date	
Proj. No 12380-001	Equip. No.		

10	CHLVLDEC001	2		* NUMBER OF LEVELS OF DECONTAMINATION
11	CHTIMDEC001	5.184E6	1.0368E7	(60, 120 DAYS)
12	CHDSRFCT001	3.	15.	
13	CHCDFRM001	1109.	2463.	
14	CHCDNFRM001	5910.	15760.	
15	CHFRFDL001	.3	.35	
16	CHFRNFDL001	.7	.5	

* DECONTAMINATION TIMES CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION (SECONDS)

* DOSE REDUCTION FACTORS CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION

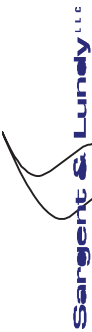
* COST OF FARM DECONTAMINATION PER FARMLAND UNIT AREA (DOLLARS/HECTARE) FOR THE VARIOUS LEVELS OF DECONTAMINATION

* COST OF NONFARM DECONTAMINATION PER RESIDENT PERSON (DOLLARS/PERSON) FOR THE VARIOUS LEVELS OF DECONTAMINATION

* FRACTION OF FARMLAND DECONTAMINATION COST DUE TO LABOR FOR THE VARIOUS DECONTAMINATION LEVELS

* FRACTION OF NON-FARM DECONTAMINATION COST DUE TO LABOR FOR THE VARIOUS DECONTAMINATION LEVELS

* FRACTION OF TIME WORKERS IN FARM AREAS SPEND IN CONTAMINATED AREAS



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.3-67	of 1.3-265
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

* FOR THE VARIOUS DECONTAMINATION LEVELS

17 CHTFWKF0001 .10 .33

* FRACTION OF TIME WORKERS IN NON-FARM AREAS SPEND IN CONTAMINATED AREAS

* FOR THE VARIOUS DECONTAMINATION LEVELS

18 CHTFWKNF001 .33 .33

* AVERAGE COST OF DECONTAMINATION LABOR (DOLLARS/MAN-YEAR)

19 CHDLBCST001 68950.

* INTERDICTION COST DATA BLOCK

* DEPRECIATION (DETERIORATION) RATE DURING INTERDICTION PERIOD (PER YEAR)

20 CHDPRATE001 .20 *(NUREG/CR-4551 PART 7 TABLE 5.1)

* INVESTMENT INCOME RETURN (DISCOUNT RATE) DURING INTERDICTION PERIOD (PER YEAR)

* THIS VALUE SHOULD BE DERIVED AS A REAL RETURN RATE ADJUSTED FOR INFLATION.

21 CHDSRATE001 .07 *(NEI 05-01)

* POPULATION RELOCATION COST (DOLLARS/PERSON)

22 CHPOPCST001 9850.

* GROUNDSHINE WEATHERING DEFINITION DATA BLOCK

* NUMBER OF TERMS IN THE GROUNDSHINE WEATHERING RELATIONSHIP (EITHER 1 OR 2)

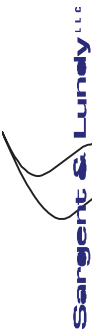


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.3-68 of 1.3-265
Non-Safety Related		Prepared by	Date
Client PSEG Nuclear Development		Reviewed by	Date
Project PSEG ESPA		Approved by	Date
Proj. No 12380-001		Equip. No.	

```

*
23 CHNGWTRM001 2
*
* GROUNDSHINE WEATHERING COEFFICIENTS
*
24 CHGWCOEF001 0.5 0.5
*
* HALF LIVES CORRESPONDING TO THE GROUNDSHINE WEATHERING COEFFICIENTS (S)
*
25 CHTGWHLF001 1.6E7 2.8E9
*
*****
* RESUSPENSION WEATHERING DEFINITION DATA BLOCK
*****
*
* NUMBER OF TERMS IN THE RESUSPENSION WEATHERING RELATIONSHIP
*
26 CHNRWTRM001 3
*
* RESUSPENSION CONCENTRATION COEFFICIENTS (/ METER)
* RELATIONSHIP BETWEEN GROUND CONCENTRATION AND INSTANTANEOUS AIR CONC.
*
27 CHRWCOEF001 1.0E-5 1.0E-7 1.0E-9 *(SAMPLE PROBLEM A, JON HELTON)
*
* HALF-LIVES CORRESPONDING TO THE RESUSPENSION CONCENTRATION COEFFICIENTS (S)
*
28 CHTRWHLF001 1.6E7 1.6E8 1.6E9 *(6 MONTHS, 5 YEARS, 50 YEARS)
*
*****
* REGIONAL CHARACTERISTICS DATA
*****
*
* FRACTION OF AREA THAT IS LAND IN THE REGION
*
29 CHFRACLD001 0.95 *(DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001	Equip. No.	Approved by	Date

* FRACTION OF LAND DEVOTED TO FARMING IN THE REGION
 * CHFRCFRM001 0.382 * (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
 * AVERAGE VALUE OF ANNUAL FARM PRODUCTION IN THE REGION (DOLLARS/HECTARE)
 * (CASH RECEIPTS FROM FARMING PLUS VALUE OF HOME CONSUMPTION) / (LAND IN FARMS)
 * CHFRMPRD001 371.0 * (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
 * FRACTION OF FARM PRODUCTION RESULTING FROM DAIRY PRODUCTION IN THE REGION
 * (VALUE OF MILK PRODUCED) / (CASH RECEIPTS FROM FARMING PLUS HOME CONSUMPTION)
 * CHDPPFRCT001 0.198 * (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
 * VALUE OF FARM WEALTH (DOLLARS/HECTARE)
 * (AVERAGE VALUE PER HECTARE OF FARM LAND AND BUILDINGS TO 50 MILES)
 * CHVALWF001 16636.
 * FRACTION OF FARM WEALTH IN IMPROVEMENTS FOR THE REGION
 * CHFRFIM0001 0.25 * SURRY & PEACH BOTTOM (NUREG/CR-4551 PART 7, TABLE 5.4)
 * NON-FARM WEALTH, PROPERTY AND IMPROVEMENTS FOR THE REGION (DOLLARS/PERSON)
 * THE VALUE OF ALL RESIDENTIAL, BUSINESS, AND PUBLIC ASSETS WHICH WOULD BE
 * LOST IN THE EVENT OF PERMANENT INTERDICTION (CONDEMNATION) OF THE AREA
 * CHVALWNF001 275924.
 * FRACTION OF NON-FARM WEALTH IN IMPROVEMENTS FOR THE REGION
 * CHFRNFIM001 0.8

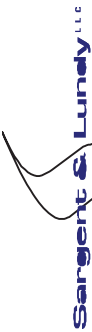


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X Non-Safety Related	Page 1.3-70	of 1.3-265
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

* FOOD INGESTION MODEL
*****
*
*NEW COMIDA2-BASED FOOD INGESTION MODEL
*
37 CHFDPATH001 'NEW'
*
* FILE PATH OF THE COMIDA2 FILE
*
38 BIN_FILE001 'C:\MACCS2\SAMP_A.BIN'
*
* THE MAXIMUM ALLOWABLE FOOD INGESTION DOSE FROM MILK CROPS
*
*
* EFFECTIVE THYROID (Sv)
DOSEMILK001 0.0025 THYROID 0.025
DOSEOTHR001 0.0025 THYROID 0.025
*
* EFFECTIVE THYROID (Sv)
DOSELONG001 0.005 THYROID 0.050
*
* NUMBER OF NUCLIDES IN THE WATER INGESTION PATHWAY MODEL
*
42 CHNUMWPI001 4
*
* TABLE OF NUCLIDE DEFINITIONS IN THE WATER INGESTION PATHWAY MODEL
*
* IF A SITE DATA FILE IS DEFINED, THE DATA DEFINING THE WATERSHED INGESTION
* FACTOR IS SUPERSEDED BY THE CORRESPONDING DATA IN THE SITE DATA FILE
*
*
* INITIAL ANNUAL INGESTION FACTOR
WATER WASHOFF WASHOFF ((Bq INGESTED)/
NUCLIDE FRACTION RATE (Bq IN WATER))
*
* NAMWPI WSHRTA WINGF
CHWTRISO001 Sr-89 0.01 0.004 5.0E-6
43

```



Calcs. For ENVIRONMENTAL CONSEQUENCE

ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev. 2 Date

Page 1.3-71 of 1.3-265

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

44 CHWTRISO002 Sr-90 0.01 0.004 5.0E-6
 45 CHWTRISO003 Cs-134 0.005 0.001 5.0E-6
 46 CHWTRISO004 Cs-137 0.005 0.001 5.0E-6

* *****

* SPECIAL OPTIONS DATA BLOCK

* *****

* DETAILED PRINT OPTION CONTROL SWITCHES, LOOK AT THE CODE BEFORE TURNING ON!!

* KSWDSC

47 CHKSWTCH001 0

* *****

* POPULATION DOSE RESULTS

* *****

* DEFINE THE TYPE 9 RESULTS

* LONG-TERM POPULATION DOSE IN A GIVEN REGION BROKEN DOWN BY THE 12 PATHWAYS

* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED

* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12

48 TYPE9NUMBER 2 (UP TO 10 ALLOWED)

* ORGNAM INNER OUTER

49 TYPE9OUT001 'L-EDEWBODY' 1 6 (0-10 MILES)
 50 TYPE9OUT002 'L-EDEWBODY' 1 10 (0-50 MILES)

* *****

* ECONOMIC COST RESULTS

* *****

* ECONOMIC COST RESULTS IN A REGION BROKEN DOWN BY 12 TYPES OF COSTS

* *



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
*
51 TYP10NUMBER 1 * (UP TO 10 ALLOWED)
*
* INNER OUTER
*
52 TYP10OUT001 1 10 *(0-50 MILES)
*
*****
* ACTION DISTANCE RESULTS
*****
* DEFINE A FLAG THAT CONTROLS THE PRODUCTION OF THE ACTION DISTANCE RESULTS
*
* SPECIFYING A VALUE OF .TRUE. TURNS ON ALL 8 OF THE ACTION DISTANCE RESULTS,
* A VALUE OF .FALSE. WILL ELIMINATE THE ACTION DISTANCE RESULTS FROM THE OUTPUT.
*
53 TYP11FLAG11 .FALSE.
*
*****
* IMPACTED AREA/POPULATION RESULTS
*****
* IMPACTED AREA/POPULATION RESULTS IN A REGION BROKEN DOWN BY 6 TYPES OF IMPACTS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 8
*
54 TYP12NUMBER 1 (UP TO 10 ALLOWED)
*
* INNER OUTER
*
55 TYP12OUT001 1 10 (0-50 MILES)
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

 * MAXIMAL ANNUAL FOOD INGESTION DOSE TO AN INDIVIDUAL

 * MAXIMAL ANNUAL FOOD INGESTION DOSE TO AN INDIVIDUAL
 * This result is calculated after accounting for temporary or permanent interdiction. It is only available for the "new" food model.
 * NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED

56 TYP13NUMBER 0 (UP TO 10 ALLOWED)

***** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT *****

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ = 314
 NUMBER OF BLANK OR COMMENT RECORDS READ = 257
 NUMBER OF TERMINATOR RECORDS = 1
 NUMBER OF RECORDS PROCESSED = 56
 NUMBER OF PROCESSED RECORDS DUPLICATED = 0
 NUMBER OF PROCESSED RECORDS SORTED = 56

 COMIDA2 binary file header =
 COMIDA2 01/14/2004 13:06:02 Version 1.11.1, 01/12/2004
 COMIDA2 descriptive title =
 MACCS File DOSDATA.INP: Changed by D. CHANIN25-JUN-92, 09:53:47
 Seven new organs added with MACCS Version 1.5.11.1



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Rev.	2
Project PSEG ESPA		Date	
Proj. No 12380-001	Equip. No.	Page	1.3-74 of 1.3-265
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

A SITE DATA FILE IS BEING USED FOR BOTH "EARLY" AND "CHRONIC"

7 CANCER EFFECTS ARE DEFINED IN THE MODEL.

INDEX	CANCER EFFECT	ORGAN	ALPHA	BETA	CFRISK	CIRISK
1	LEUKEMIA	L-RED MARR	1.000E+00	0.000E+00	9.700E-03	0.000E+00
2	BONE	L-BONE SUR	1.000E+00	0.000E+00	1.200E-04	0.000E+00
3	BREAST	L-BREAST	1.000E+00	0.000E+00	5.400E-03	1.700E-02
4	LUNG	L-LUNGS	1.000E+00	0.000E+00	1.550E-02	0.000E+00
5	THYROID	L-THYROIDH	1.000E+00	0.000E+00	7.200E-04	7.200E-03
6	GI	L-LOWER LI	1.000E+00	0.000E+00	3.360E-02	0.000E+00
7	OTHER	L-EDEWBODY	1.000E+00	0.000E+00	2.760E-02	0.000E+00

TIME OF HOTSPOT RELOCATION IS 4.3200E+04.

TIME OF NORMAL RETURN IS 8.640E+04 AND THE EMERGENCY PHASE ENDS AT 6.048E+05.

GROUNDSHINE SHIELDING FACTOR = 0.330

RESUSPENSION PROTECTION FACTOR = 0.410

BREATHING RATE (CUBIC M/S) = 2.660E-04

DISPERSION MODEL FLAG IS 2

WINDROSE PROBABILITIES BY WIND DIRECTION AND MET BIN NUMBER

BIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	0.1923	0.0000	0.2692	0.0385	0.1154	0.0769	0.0000	0.0385	0.0385	0.0000	0.0000	0.0000	0.0385	0.0769	0.0000	0.1154
2	0.0050	0.0050	0.0274	0.0498	0.0871	0.0920	0.2438	0.1542	0.0622	0.0398	0.0199	0.0025	0.0149	0.0149	0.0995	0.0821
3	0.0000	0.0303	0.0606	0.0000	0.0000	0.0606	0.0303	0.0909	0.0909	0.2121	0.1212	0.0909	0.1212	0.0303	0.0000	0.0606
4	0.0734	0.0765	0.0550	0.0489	0.0550	0.0673	0.0642	0.0765	0.0765	0.0887	0.0703	0.0642	0.0398	0.0306	0.0336	0.0795
5	0.0852	0.0762	0.1181	0.0658	0.0688	0.0553	0.0553	0.0688	0.0703	0.0538	0.0493	0.0538	0.0463	0.0209	0.0404	0.0717
6	0.0758	0.0735	0.0719	0.0579	0.0774	0.0618	0.0970	0.0774	0.0500	0.0970	0.0868	0.0219	0.0039	0.0172	0.0508	0.0797
7	0.0821	0.0709	0.0311	0.0311	0.0684	0.1356	0.1791	0.0585	0.0659	0.0435	0.0249	0.0050	0.0000	0.0112	0.1119	0.0808



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

Processing a Site Data File with Header: MACCS2 SITE FILE FOR PSEG ESPA
 Originator: G. Teagarden (7/14/2008) - Population Updated by S&L 10/2009



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

THIS PROGRAM CURRENTLY ALLOWS THE GENERATION OF UP TO 394 RESULTS

YOU HAVE REQUESTED 16 RESULTS FROM "EARLY" COMPOSED OF:

- 5 RESULTS OF TYPE 1
- 0 RESULTS OF TYPE 2
- 2 RESULTS OF TYPE 3
- 0 RESULTS OF TYPE 4
- 2 RESULTS OF TYPE 5
- 0 RESULTS OF TYPE 6
- 0 RESULTS OF TYPE 7
- 6 RESULTS OF TYPE 8
- 1 RESULTS OF TYPE A
- 0 RESULTS OF TYPE B

YOU HAVE REQUESTED 55 RESULTS FROM "CHRONC" COMPOSED OF:

- 34 RESULTS OF TYPE 9
- 13 RESULTS OF TYPE 10
- 0 RESULTS OF TYPE 11
- 8 RESULTS OF TYPE 12
- 0 RESULTS OF TYPE 13

TRIAL	DAY	HOUR	BIN	PRBMET
1	152	7	18	4.00E-04



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-78 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001 Equip. No.	Approved by
	Date
	Date
	Date

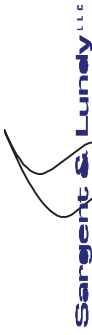
WARNING!! WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

For Julian Day 152, selecting COMIDA2 results # 4 of 9
 2 152 13 24 1.14E-04
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 3 152 18 21 2.40E-03
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 4 153 4 3 3.14E-04
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 5 153 7 26 2.95E-04
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 6 153 9 26 2.95E-04
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 7 153 12 25 3.04E-04
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 8 153 14 25 3.04E-04
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 9 154 24 9 8.75E-04
 For Julian Day 154, selecting COMIDA2 results # 4 of 9
 10 155 17 6 1.22E-02
 For Julian Day 155, selecting COMIDA2 results # 4 of 9
 11 156 20 26 2.95E-04
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 12 156 23 26 2.95E-04
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 13 157 2 25 3.04E-04
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 14 157 3 24 1.14E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-79 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001 Equip. No.	Approved by
	Date
	Date
	Date

For Julian Day 157, selecting COMIDA2 results # 4 of 9
 15 157 4 22 7.23E-04

For Julian Day 157, selecting COMIDA2 results # 4 of 9
 16 157 17 27 2.76E-04

For Julian Day 157, selecting COMIDA2 results # 4 of 9
 17 157 18 27 2.76E-04

For Julian Day 157, selecting COMIDA2 results # 4 of 9
 18 157 19 22 7.23E-04

For Julian Day 157, selecting COMIDA2 results # 4 of 9
 19 158 17 4 3.11E-03

For Julian Day 158, selecting COMIDA2 results # 4 of 9
 20 159 7 3 3.14E-04

For Julian Day 159, selecting COMIDA2 results # 4 of 9
 21 159 11 1 2.47E-04

For Julian Day 159, selecting COMIDA2 results # 4 of 9
 22 160 7 10 4.33E-03

For Julian Day 160, selecting COMIDA2 results # 4 of 9
 23 160 14 12 1.27E-02

For Julian Day 160, selecting COMIDA2 results # 4 of 9
 24 162 12 36 2.19E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 25 162 14 36 2.19E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 26 162 15 35 2.47E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 27 162 17 34 1.14E-04

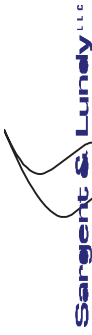
For Julian Day 162, selecting COMIDA2 results # 4 of 9
 28 162 18 32 3.61E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 29 162 20 19 9.51E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 30 162 24 20 3.17E-03

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 31 163 14 17 3.45E-03

For Julian Day 163, selecting COMIDA2 results # 4 of 9



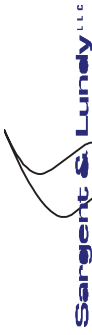
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-80 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

32	For Julian Day 163, selecting COMIDA2 results # 4 of 9	19	18	4.00E-04
33	For Julian Day 166, selecting COMIDA2 results # 4 of 9	10	7	7.65E-03
34	For Julian Day 166, selecting COMIDA2 results # 4 of 9	16	36	2.19E-04
35	For Julian Day 166, selecting COMIDA2 results # 4 of 9	18	36	2.19E-04
36	For Julian Day 166, selecting COMIDA2 results # 4 of 9	19	35	2.47E-04
37	For Julian Day 166, selecting COMIDA2 results # 4 of 9	12	5	6.36E-03
38	For Julian Day 167, selecting COMIDA2 results # 5 of 9	21	15	2.97E-03
39	For Julian Day 167, selecting COMIDA2 results # 5 of 9	4	11	6.66E-03
40	For Julian Day 168, selecting COMIDA2 results # 5 of 9	7	31	2.85E-04
41	For Julian Day 169, selecting COMIDA2 results # 5 of 9	10	31	2.85E-04
42	For Julian Day 169, selecting COMIDA2 results # 5 of 9	11	31	2.85E-04
43	For Julian Day 169, selecting COMIDA2 results # 5 of 9	13	30	2.57E-04
44	For Julian Day 169, selecting COMIDA2 results # 5 of 9	15	29	1.14E-04
45	For Julian Day 169, selecting COMIDA2 results # 5 of 9	16	28	1.14E-04
46	For Julian Day 169, selecting COMIDA2 results # 5 of 9	18	30	2.57E-04
47	For Julian Day 169, selecting COMIDA2 results # 5 of 9	20	29	1.14E-04
48	For Julian Day 169, selecting COMIDA2 results # 5 of 9	21	27	2.76E-04
49	For Julian Day 169, selecting COMIDA2 results # 5 of 9	16	8	2.64E-03



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

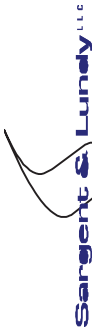
Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-81 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001 Equip. No.	Approved by
	Date
	Date
	Date

For Julian Day 173, selecting COMIDA2 results # 5 of 9
 50 174 16 25 3.04E-04
 For Julian Day 174, selecting COMIDA2 results # 5 of 9

TRIAL	DAY	HOUR	BIN	PRBMET
51	174	17	24	1.14E-04
For Julian Day 174, selecting COMIDA2 results # 5 of 9				
52	174	18	23	1.14E-04
For Julian Day 174, selecting COMIDA2 results # 5 of 9				
53	177	11	36	2.19E-04
For Julian Day 177, selecting COMIDA2 results # 5 of 9				
54	177	13	35	2.47E-04
For Julian Day 177, selecting COMIDA2 results # 5 of 9				
55	177	14	35	2.47E-04
For Julian Day 177, selecting COMIDA2 results # 5 of 9				
56	180	21	36	2.19E-04
For Julian Day 180, selecting COMIDA2 results # 5 of 9				
57	180	23	35	2.47E-04
For Julian Day 180, selecting COMIDA2 results # 5 of 9				
58	180	24	34	1.14E-04
For Julian Day 180, selecting COMIDA2 results # 5 of 9				
59	183	8	5	6.36E-03
For Julian Day 183, selecting COMIDA2 results # 5 of 9				
60	183	13	26	2.95E-04
For Julian Day 183, selecting COMIDA2 results # 5 of 9				
61	183	15	25	3.04E-04
For Julian Day 183, selecting COMIDA2 results # 5 of 9				
62	183	16	22	7.23E-04
For Julian Day 183, selecting COMIDA2 results # 5 of 9				
63	183	17	32	3.61E-04
For Julian Day 183, selecting COMIDA2 results # 5 of 9				
64	185	15	4	3.11E-03
For Julian Day 185, selecting COMIDA2 results # 5 of 9				
65	186	11	2	3.82E-03



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-82 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 186, selecting COMIDA2 results # 5 of 9
66 186 15 8 2.64E-03

For Julian Day 186, selecting COMIDA2 results # 5 of 9
67 187 2 31 2.85E-04

For Julian Day 187, selecting COMIDA2 results # 5 of 9
68 187 3 30 2.57E-04

For Julian Day 187, selecting COMIDA2 results # 5 of 9
69 187 4 29 1.14E-04

For Julian Day 187, selecting COMIDA2 results # 5 of 9
70 189 2 14 2.25E-03

For Julian Day 189, selecting COMIDA2 results # 5 of 9
71 190 12 6 1.22E-02

For Julian Day 190, selecting COMIDA2 results # 5 of 9
72 190 22 16 3.17E-03

For Julian Day 190, selecting COMIDA2 results # 5 of 9
73 194 5 36 2.19E-04

For Julian Day 194, selecting COMIDA2 results # 6 of 9
74 194 8 32 3.61E-04

For Julian Day 194, selecting COMIDA2 results # 6 of 9
75 194 14 27 2.76E-04

For Julian Day 194, selecting COMIDA2 results # 6 of 9
76 194 18 32 3.61E-04

For Julian Day 194, selecting COMIDA2 results # 6 of 9
77 196 3 10 4.33E-03

For Julian Day 196, selecting COMIDA2 results # 6 of 9
78 196 15 35 2.47E-04

For Julian Day 196, selecting COMIDA2 results # 6 of 9
79 198 20 11 6.66E-03

For Julian Day 198, selecting COMIDA2 results # 6 of 9
80 200 8 32 3.61E-04

For Julian Day 200, selecting COMIDA2 results # 6 of 9
81 202 24 9 8.75E-04

For Julian Day 202, selecting COMIDA2 results # 6 of 9
82 204 5 13 4.57E-04

For Julian Day 204, selecting COMIDA2 results # 6 of 9



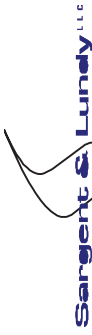
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-83 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

83	204	16	7	7.65E-03
For Julian Day 204,	selecting	COMIDA2	results #	6 of 9
84	206	18	6	1.22E-02
For Julian Day 206,	selecting	COMIDA2	results #	6 of 9
85	209	2	5	6.36E-03
For Julian Day 209,	selecting	COMIDA2	results #	6 of 9
86	209	10	36	2.19E-04
For Julian Day 209,	selecting	COMIDA2	results #	6 of 9
87	209	13	32	3.61E-04
For Julian Day 209,	selecting	COMIDA2	results #	6 of 9
88	209	24	20	3.17E-03
For Julian Day 209,	selecting	COMIDA2	results #	6 of 9
89	210	2	19	9.51E-04
For Julian Day 210,	selecting	COMIDA2	results #	6 of 9
90	210	7	3	3.14E-04
For Julian Day 210,	selecting	COMIDA2	results #	6 of 9
91	210	10	4	3.11E-03
For Julian Day 210,	selecting	COMIDA2	results #	6 of 9
92	210	12	4	3.11E-03
For Julian Day 210,	selecting	COMIDA2	results #	6 of 9
93	211	3	10	4.33E-03
For Julian Day 211,	selecting	COMIDA2	results #	6 of 9
94	215	2	9	8.75E-04
For Julian Day 215,	selecting	COMIDA2	results #	6 of 9
95	215	7	3	3.14E-04
For Julian Day 215,	selecting	COMIDA2	results #	6 of 9
96	216	4	3	3.14E-04
For Julian Day 216,	selecting	COMIDA2	results #	6 of 9
97	216	6	9	8.75E-04
For Julian Day 216,	selecting	COMIDA2	results #	6 of 9
98	217	3	11	6.66E-03
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9
99	217	12	31	2.85E-04
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9
100	217	16	30	2.57E-04



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-84 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 217, selecting COMIDA2 results # 6 of 9

TRIAL	DAY	HOUR	BIN	PRBMET
101	217	18	30	2.57E-04
For Julian Day 217, selecting COMIDA2 results # 6 of 9				
102	217	19	29	1.14E-04
For Julian Day 217, selecting COMIDA2 results # 6 of 9				
103	217	20	27	2.76E-04
For Julian Day 217, selecting COMIDA2 results # 6 of 9				
104	218	6	19	9.51E-04
For Julian Day 218, selecting COMIDA2 results # 6 of 9				
105	218	23	12	1.27E-02
For Julian Day 218, selecting COMIDA2 results # 6 of 9				
106	223	22	7	7.65E-03
For Julian Day 223, selecting COMIDA2 results # 7 of 9				
107	224	18	17	3.45E-03
For Julian Day 224, selecting COMIDA2 results # 7 of 9				
108	226	9	26	2.95E-04
For Julian Day 226, selecting COMIDA2 results # 7 of 9				
109	226	12	24	1.14E-04
For Julian Day 226, selecting COMIDA2 results # 7 of 9				
110	226	14	6	1.22E-02
For Julian Day 226, selecting COMIDA2 results # 7 of 9				
111	226	19	4	3.11E-03
For Julian Day 226, selecting COMIDA2 results # 7 of 9				
112	227	16	18	4.00E-04
For Julian Day 227, selecting COMIDA2 results # 7 of 9				
113	228	3	3	3.14E-04
For Julian Day 228, selecting COMIDA2 results # 7 of 9				
114	228	5	10	4.33E-03
For Julian Day 228, selecting COMIDA2 results # 7 of 9				
115	228	20	21	2.40E-03
For Julian Day 228, selecting COMIDA2 results # 7 of 9				
116	229	6	17	3.45E-03



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-85 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 229, selecting COMIDA2 results # 7 of 9
 117 230 9 26 2.95E-04

For Julian Day 230, selecting COMIDA2 results # 7 of 9
 118 230 12 26 2.95E-04

For Julian Day 230, selecting COMIDA2 results # 7 of 9
 119 230 15 25 3.04E-04

For Julian Day 230, selecting COMIDA2 results # 7 of 9
 120 230 16 25 3.04E-04

For Julian Day 230, selecting COMIDA2 results # 7 of 9
 121 230 17 24 1.14E-04

For Julian Day 230, selecting COMIDA2 results # 7 of 9
 122 230 18 22 7.23E-04

For Julian Day 230, selecting COMIDA2 results # 7 of 9
 123 230 23 20 3.17E-03

For Julian Day 230, selecting COMIDA2 results # 7 of 9
 124 231 13 36 2.19E-04

For Julian Day 231, selecting COMIDA2 results # 7 of 9
 125 231 14 36 2.19E-04

For Julian Day 231, selecting COMIDA2 results # 7 of 9
 126 231 16 35 2.47E-04

For Julian Day 231, selecting COMIDA2 results # 7 of 9
 127 231 18 34 1.14E-04

For Julian Day 231, selecting COMIDA2 results # 7 of 9
 128 234 14 30 2.57E-04

For Julian Day 234, selecting COMIDA2 results # 7 of 9
 129 235 16 5 6.36E-03

For Julian Day 235, selecting COMIDA2 results # 7 of 9
 130 236 13 1 2.47E-04

For Julian Day 236, selecting COMIDA2 results # 7 of 9
 131 238 7 11 6.66E-03

For Julian Day 238, selecting COMIDA2 results # 7 of 9
 132 243 12 27 2.76E-04

For Julian Day 243, selecting COMIDA2 results # 7 of 9
 133 243 15 24 1.14E-04

For Julian Day 243, selecting COMIDA2 results # 7 of 9

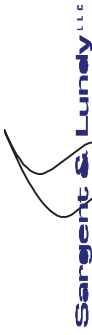


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-86 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

134	243	17	26	2.95E-04		
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9			
135	243	21	25	3.04E-04		
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9			
136	243	23	24	1.14E-04		
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9			
137	245	7	15	2.97E-03		
For Julian Day 245,	selecting	COMIDA2	results # 7 of 9			
138	248	3	14	2.25E-03		
For Julian Day 248,	selecting	COMIDA2	results # 7 of 9			
139	250	15	6	1.22E-02		
For Julian Day 250,	selecting	COMIDA2	results # 7 of 9			
140	251	10	1	2.47E-04		
For Julian Day 251,	selecting	COMIDA2	results # 7 of 9			
141	253	2	8	2.64E-03		
For Julian Day 253,	selecting	COMIDA2	results # 7 of 9			
142	253	4	25	3.04E-04		
For Julian Day 253,	selecting	COMIDA2	results # 7 of 9			
143	254	4	12	1.27E-02		
For Julian Day 254,	selecting	COMIDA2	results # 7 of 9			
144	254	24	14	2.25E-03		
For Julian Day 254,	selecting	COMIDA2	results # 7 of 9			
145	255	13	5	6.36E-03		
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9			
146	255	14	4	3.11E-03		
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9			
147	260	5	3	3.14E-04		
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9			
148	260	10	1	2.47E-04		
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9			
149	263	14	2	3.82E-03		
For Julian Day 263,	selecting	COMIDA2	results # 8 of 9			
150	264	13	5	6.36E-03		
For Julian Day 264,	selecting	COMIDA2	results # 8 of 9			

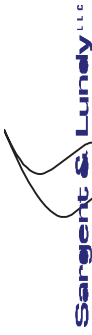


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-87 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	DAY	HOUR	BIN	PRBMET
151	266	7	16	3.17E-03
	For Julian Day 266, selecting COMIDA2 results # 8 of 9			
152	269	8	9	8.75E-04
	For Julian Day 269, selecting COMIDA2 results # 8 of 9			
153	269	13	1	2.47E-04
	For Julian Day 269, selecting COMIDA2 results # 8 of 9			
154	270	21	9	8.75E-04
	For Julian Day 270, selecting COMIDA2 results # 8 of 9			
155	271	8	13	4.57E-04
	For Julian Day 271, selecting COMIDA2 results # 8 of 9			
156	271	17	21	2.40E-03
	For Julian Day 271, selecting COMIDA2 results # 8 of 9			
157	271	20	20	3.17E-03
	For Julian Day 271, selecting COMIDA2 results # 8 of 9			
158	271	24	18	4.00E-04
	For Julian Day 271, selecting COMIDA2 results # 8 of 9			
159	272	2	31	2.85E-04
	For Julian Day 272, selecting COMIDA2 results # 8 of 9			
160	272	3	30	2.57E-04
	For Julian Day 272, selecting COMIDA2 results # 8 of 9			
161	272	6	29	1.14E-04
	For Julian Day 272, selecting COMIDA2 results # 8 of 9			
162	272	9	36	2.19E-04
	For Julian Day 272, selecting COMIDA2 results # 8 of 9			
163	272	11	35	2.47E-04
	For Julian Day 272, selecting COMIDA2 results # 8 of 9			
164	272	13	34	1.14E-04
	For Julian Day 272, selecting COMIDA2 results # 8 of 9			
165	272	15	32	3.61E-04
	For Julian Day 272, selecting COMIDA2 results # 8 of 9			
166	272	21	32	3.61E-04
	For Julian Day 272, selecting COMIDA2 results # 8 of 9			
167	274	20	11	6.66E-03



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 274, selecting COMIDA2 results # 8 of 9
 168 274 21 15 2.97E-03

For Julian Day 274, selecting COMIDA2 results # 8 of 9
 169 275 10 4 3.11E-03

For Julian Day 275, selecting COMIDA2 results # 8 of 9
 170 276 3 21 2.40E-03

For Julian Day 276, selecting COMIDA2 results # 8 of 9
 171 276 18 10 4.33E-03

For Julian Day 276, selecting COMIDA2 results # 8 of 9
 172 277 17 3 3.14E-04

For Julian Day 277, selecting COMIDA2 results # 8 of 9
 173 278 12 1 2.47E-04

For Julian Day 278, selecting COMIDA2 results # 8 of 9
 174 280 9 4 3.11E-03

For Julian Day 280, selecting COMIDA2 results # 8 of 9
 175 281 21 10 4.33E-03

For Julian Day 281, selecting COMIDA2 results # 8 of 9
 176 281 24 13 4.57E-04

For Julian Day 281, selecting COMIDA2 results # 8 of 9
 177 282 6 13 4.57E-04

For Julian Day 282, selecting COMIDA2 results # 8 of 9
 178 282 7 13 4.57E-04

For Julian Day 282, selecting COMIDA2 results # 8 of 9
 179 282 8 9 8.75E-04

For Julian Day 282, selecting COMIDA2 results # 8 of 9
 180 285 8 7 7.65E-03

For Julian Day 285, selecting COMIDA2 results # 8 of 9
 181 285 14 2 3.82E-03

For Julian Day 285, selecting COMIDA2 results # 8 of 9
 182 289 23 12 1.27E-02

For Julian Day 289, selecting COMIDA2 results # 9 of 9
 183 292 21 19 9.51E-04

For Julian Day 292, selecting COMIDA2 results # 9 of 9
 184 292 24 27 2.76E-04

For Julian Day 292, selecting COMIDA2 results # 9 of 9



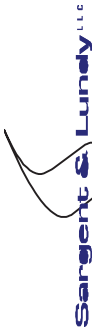
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-89 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

185	293	1	32	3.61E-04
For Julian Day 293,	selecting	COMIDA2	results #	9 of 9
186	293	3	17	3.45E-03
For Julian Day 293,	selecting	COMIDA2	results #	9 of 9
187	297	22	15	2.97E-03
For Julian Day 297,	selecting	COMIDA2	results #	9 of 9
188	299	7	10	4.33E-03
For Julian Day 299,	selecting	COMIDA2	results #	9 of 9
189	299	18	3	3.14E-04
For Julian Day 299,	selecting	COMIDA2	results #	9 of 9
190	300	3	11	6.66E-03
For Julian Day 300,	selecting	COMIDA2	results #	9 of 9
191	300	16	6	1.22E-02
For Julian Day 300,	selecting	COMIDA2	results #	9 of 9
192	301	20	14	2.25E-03
For Julian Day 301,	selecting	COMIDA2	results #	9 of 9
193	302	14	5	6.36E-03
For Julian Day 302,	selecting	COMIDA2	results #	9 of 9
194	304	6	24	1.14E-04
For Julian Day 304,	selecting	COMIDA2	results #	9 of 9
195	309	9	18	4.00E-04
For Julian Day 309,	selecting	COMIDA2	results #	9 of 9
196	309	16	22	7.23E-04
For Julian Day 309,	selecting	COMIDA2	results #	9 of 9
197	313	1	16	3.17E-03
For Julian Day 313,	selecting	COMIDA2	results #	9 of 9
198	314	2	12	1.27E-02
For Julian Day 314,	selecting	COMIDA2	results #	9 of 9
199	315	2	31	2.85E-04
For Julian Day 315,	selecting	COMIDA2	results #	9 of 9
200	315	5	31	2.85E-04
For Julian Day 315,	selecting	COMIDA2	results #	9 of 9

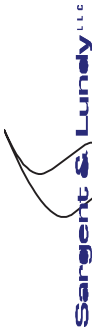


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-90 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

201	315	7	30	2.57E-04			
For Julian Day 315,	selecting	COMIDA2	results #	9 of 9			
202	315	9	30	2.57E-04			
For Julian Day 315,	selecting	COMIDA2	results #	9 of 9			
203	315	10	29	1.14E-04			
For Julian Day 315,	selecting	COMIDA2	results #	9 of 9			
204	315	11	28	1.14E-04			
For Julian Day 315,	selecting	COMIDA2	results #	9 of 9			
205	315	12	27	2.76E-04			
For Julian Day 315,	selecting	COMIDA2	results #	9 of 9			
206	317	20	22	7.23E-04			
For Julian Day 317,	selecting	COMIDA2	results #	9 of 9			
207	318	6	7	7.65E-03			
For Julian Day 318,	selecting	COMIDA2	results #	9 of 9			
208	321	22	14	2.25E-03			
For Julian Day 321,	selecting	COMIDA2	results #	9 of 9			
209	323	11	11	6.66E-03			
For Julian Day 323,	selecting	COMIDA2	results #	9 of 9			
210	324	4	13	4.57E-04			
For Julian Day 324,	selecting	COMIDA2	results #	9 of 9			
211	324	18	9	8.75E-04			
For Julian Day 324,	selecting	COMIDA2	results #	9 of 9			
212	324	21	13	4.57E-04			
For Julian Day 324,	selecting	COMIDA2	results #	9 of 9			
213	325	18	24	1.14E-04			
For Julian Day 325,	selecting	COMIDA2	results #	9 of 9			
214	325	19	23	1.14E-04			
For Julian Day 325,	selecting	COMIDA2	results #	9 of 9			
215	326	8	5	6.36E-03			
For Julian Day 326,	selecting	COMIDA2	results #	9 of 9			
216	326	17	21	2.40E-03			
For Julian Day 326,	selecting	COMIDA2	results #	9 of 9			
217	326	21	20	3.17E-03			
For Julian Day 326,	selecting	COMIDA2	results #	9 of 9			
218	327	3	19	9.51E-04			



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-91 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 327, selecting COMIDA2 results # 9 of 9
 219 327 18 17 3.45E-03

For Julian Day 327, selecting COMIDA2 results # 9 of 9
 220 328 13 4 3.11E-03

For Julian Day 328, selecting COMIDA2 results # 9 of 9
 221 328 24 21 2.40E-03

For Julian Day 328, selecting COMIDA2 results # 9 of 9
 222 330 20 8 2.64E-03

For Julian Day 330, selecting COMIDA2 results # 9 of 9
 223 331 17 6 1.22E-02

For Julian Day 331, selecting COMIDA2 results # 9 of 9
 224 333 5 32 3.61E-04

For Julian Day 333, selecting COMIDA2 results # 9 of 9
 225 333 6 27 2.76E-04

For Julian Day 333, selecting COMIDA2 results # 9 of 9
 226 333 8 17 3.45E-03

For Julian Day 333, selecting COMIDA2 results # 9 of 9
 227 335 4 9 8.75E-04

For Julian Day 335, selecting COMIDA2 results # 1 of 9
 228 335 7 15 2.97E-03

For Julian Day 335, selecting COMIDA2 results # 1 of 9
 229 336 1 20 3.17E-03

For Julian Day 336, selecting COMIDA2 results # 1 of 9
 230 336 15 8 2.64E-03

For Julian Day 336, selecting COMIDA2 results # 1 of 9
 231 338 1 14 2.25E-03

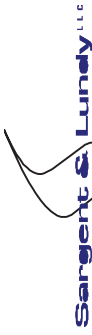
For Julian Day 338, selecting COMIDA2 results # 1 of 9
 232 338 8 12 1.27E-02

For Julian Day 338, selecting COMIDA2 results # 1 of 9
 233 342 8 22 7.23E-04

For Julian Day 342, selecting COMIDA2 results # 1 of 9
 234 342 11 18 4.00E-04

For Julian Day 342, selecting COMIDA2 results # 1 of 9
 235 343 18 16 3.17E-03

For Julian Day 343, selecting COMIDA2 results # 1 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

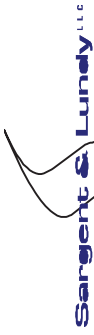
Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-92 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

236	344	4	26	2.95E-04
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9	
237	344	8	26	2.95E-04
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9	
238	344	10	25	3.04E-04
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9	
239	344	13	25	3.04E-04
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9	
240	344	14	24	1.14E-04
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9	
241	344	15	23	1.14E-04
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9	
242	345	8	19	9.51E-04
For Julian Day 345,	selecting	COMIDA2	results # 1 of 9	
243	345	21	14	2.25E-03
For Julian Day 345,	selecting	COMIDA2	results # 1 of 9	
244	346	10	18	4.00E-04
For Julian Day 346,	selecting	COMIDA2	results # 1 of 9	
245	349	14	2	3.82E-03
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9	
246	349	17	7	7.65E-03
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9	
247	350	24	11	6.66E-03
For Julian Day 350,	selecting	COMIDA2	results # 1 of 9	
248	352	22	10	4.33E-03
For Julian Day 352,	selecting	COMIDA2	results # 1 of 9	
249	353	17	10	4.33E-03
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9	
250	353	24	21	2.40E-03
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9	

TRIAL	DAY	356	21	15	PRBMET
For Julian Day 356,	selecting	COMIDA2	results # 1 of 9		



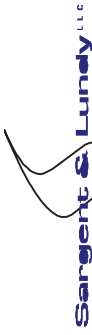
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-93 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

252	358	6	16	3.17E-03
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9	
253	358	22	12	1.27E-02
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9	
254	363	22	7	7.65E-03
For Julian Day 363,	selecting	COMIDA2	results # 1 of 9	
255	365	4	13	4.57E-04
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9	
256	365	9	13	4.57E-04
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9	
257	2	7	19	9.51E-04
For Julian Day 2,	selecting	COMIDA2	results # 1 of 9	
258	3	11	14	2.25E-03
For Julian Day 3,	selecting	COMIDA2	results # 1 of 9	
259	5	19	11	6.66E-03
For Julian Day 5,	selecting	COMIDA2	results # 1 of 9	
260	6	9	6	1.22E-02
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9	
261	6	17	8	2.64E-03
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9	
262	10	13	2	3.82E-03
For Julian Day 10,	selecting	COMIDA2	results # 1 of 9	
263	13	10	20	3.17E-03
For Julian Day 13,	selecting	COMIDA2	results # 1 of 9	
264	16	2	8	2.64E-03
For Julian Day 16,	selecting	COMIDA2	results # 1 of 9	
265	16	20	7	7.65E-03
For Julian Day 16,	selecting	COMIDA2	results # 1 of 9	
266	18	10	17	3.45E-03
For Julian Day 18,	selecting	COMIDA2	results # 1 of 9	
267	19	10	8	2.64E-03
For Julian Day 19,	selecting	COMIDA2	results # 1 of 9	
268	20	9	6	1.22E-02
For Julian Day 20,	selecting	COMIDA2	results # 1 of 9	
269	23	1	8	2.64E-03



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-94 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001 Equip. No.	Approved by
	Date
	Date
	Date

For Julian Day 23, selecting COMIDA2 results # 1 of 9
 270 24 4 3 3.14E-04

For Julian Day 24, selecting COMIDA2 results # 1 of 9
 271 24 15 7 7.65E-03

For Julian Day 24, selecting COMIDA2 results # 1 of 9
 272 25 14 20 3.17E-03

For Julian Day 25, selecting COMIDA2 results # 1 of 9
 273 25 20 19 9.51E-04

For Julian Day 25, selecting COMIDA2 results # 1 of 9
 274 25 21 18 4.00E-04

For Julian Day 25, selecting COMIDA2 results # 1 of 9
 275 26 2 17 3.45E-03

For Julian Day 26, selecting COMIDA2 results # 1 of 9
 276 33 17 9 8.75E-04

For Julian Day 33, selecting COMIDA2 results # 2 of 9
 277 33 19 15 2.97E-03

For Julian Day 33, selecting COMIDA2 results # 2 of 9
 278 36 23 18 4.00E-04

For Julian Day 36, selecting COMIDA2 results # 2 of 9
 279 37 17 22 7.23E-04

For Julian Day 37, selecting COMIDA2 results # 2 of 9
 280 39 17 6 1.22E-02

For Julian Day 39, selecting COMIDA2 results # 2 of 9
 281 40 22 16 3.17E-03

For Julian Day 40, selecting COMIDA2 results # 2 of 9
 282 42 5 12 1.27E-02

For Julian Day 42, selecting COMIDA2 results # 2 of 9
 283 42 23 13 4.57E-04

For Julian Day 42, selecting COMIDA2 results # 2 of 9
 284 43 8 9 8.75E-04

For Julian Day 43, selecting COMIDA2 results # 2 of 9
 285 44 6 11 6.66E-03

For Julian Day 44, selecting COMIDA2 results # 2 of 9
 286 44 22 15 2.97E-03

For Julian Day 44, selecting COMIDA2 results # 2 of 9



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.3-95 of 1.3-265

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

287	46	20	12	1.27E-02
For Julian Day	46,	selecting	COMIDA2	results # 2 of 9
288	47	11	2	3.82E-03
For Julian Day	47,	selecting	COMIDA2	results # 2 of 9
289	47	17	5	6.36E-03
For Julian Day	47,	selecting	COMIDA2	results # 2 of 9
290	48	1	14	2.25E-03
For Julian Day	48,	selecting	COMIDA2	results # 2 of 9
291	48	14	4	3.11E-03
For Julian Day	48,	selecting	COMIDA2	results # 2 of 9
292	53	13	2	3.82E-03
For Julian Day	53,	selecting	COMIDA2	results # 2 of 9
293	53	17	7	7.65E-03
For Julian Day	53,	selecting	COMIDA2	results # 2 of 9
294	55	5	21	2.40E-03
For Julian Day	55,	selecting	COMIDA2	results # 2 of 9
295	62	9	16	3.17E-03
For Julian Day	62,	selecting	COMIDA2	results # 2 of 9
296	62	23	16	3.17E-03
For Julian Day	62,	selecting	COMIDA2	results # 2 of 9
297	63	19	14	2.25E-03
For Julian Day	63,	selecting	COMIDA2	results # 2 of 9
298	64	1	15	2.97E-03
For Julian Day	64,	selecting	COMIDA2	results # 2 of 9
299	64	15	5	6.36E-03
For Julian Day	64,	selecting	COMIDA2	results # 2 of 9
300	66	6	27	2.76E-04
For Julian Day	66,	selecting	COMIDA2	results # 2 of 9

TRIAL	DAY	HOUR	BIN	PRBMET
301	66	7	32	3.61E-04
For Julian Day	66,	selecting	COMIDA2	results # 2 of 9
302	66	8	22	7.23E-04
For Julian Day	66,	selecting	COMIDA2	results # 2 of 9



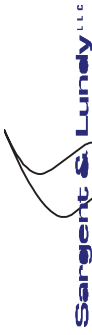
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-96 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

303	For Julian Day 66,	12	35	2.47E-04
304	66, selecting	COMIDA2	results #	2 of 9
305	68,	19	10	4.33E-03
306	68, selecting	COMIDA2	results #	2 of 9
307	69,	15	1	2.47E-04
308	69, selecting	COMIDA2	results #	2 of 9
309	72,	11	2	3.82E-03
310	72, selecting	COMIDA2	results #	2 of 9
311	74,	8	10	4.33E-03
312	74, selecting	COMIDA2	results #	2 of 9
313	75,	24	21	2.40E-03
314	75, selecting	COMIDA2	results #	2 of 9
315	76,	6	19	9.51E-04
316	76, selecting	COMIDA2	results #	2 of 9
317	78,	6	3	3.14E-04
318	78, selecting	COMIDA2	results #	2 of 9
319	79,	2	22	7.23E-04
320	79, selecting	COMIDA2	results #	2 of 9
	79,	6	17	3.45E-03
	79, selecting	COMIDA2	results #	2 of 9
	80,	2	11	6.66E-03
	80, selecting	COMIDA2	results #	2 of 9
	80,	5	13	4.57E-04
	80, selecting	COMIDA2	results #	2 of 9
	81,	19	8	2.64E-03
	81, selecting	COMIDA2	results #	2 of 9
	84,	24	18	4.00E-04
	84, selecting	COMIDA2	results #	2 of 9
	85,	3	17	3.45E-03
	85, selecting	COMIDA2	results #	2 of 9
	86,	13	12	1.27E-02
	86, selecting	COMIDA2	results #	2 of 9
	87,	7	20	3.17E-03
	87, selecting	COMIDA2	results #	2 of 9
	89,	13	1	2.47E-04



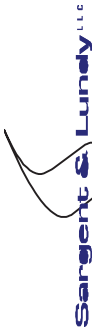
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-97 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 89,	selecting	COMIDA2	results # 2 of 9
321	90	19	9.51E-04
For Julian Day 90,	selecting	COMIDA2	results # 2 of 9
322	91	2	3.17E-03
For Julian Day 91,	selecting	COMIDA2	results # 2 of 9
323	94	1	9.51E-04
For Julian Day 94,	selecting	COMIDA2	results # 3 of 9
324	95	20	2.64E-03
For Julian Day 95,	selecting	COMIDA2	results # 3 of 9
325	96	21	1.27E-02
For Julian Day 96,	selecting	COMIDA2	results # 3 of 9
326	97	11	3.82E-03
For Julian Day 97,	selecting	COMIDA2	results # 3 of 9
327	97	24	2.97E-03
For Julian Day 97,	selecting	COMIDA2	results # 3 of 9
328	98	5	2.25E-03
For Julian Day 98,	selecting	COMIDA2	results # 3 of 9
329	98	8	2.97E-03
For Julian Day 98,	selecting	COMIDA2	results # 3 of 9
330	98	13	3.82E-03
For Julian Day 98,	selecting	COMIDA2	results # 3 of 9
331	99	8	2.40E-03
For Julian Day 99,	selecting	COMIDA2	results # 3 of 9
332	99	23	4.00E-04
For Julian Day 99,	selecting	COMIDA2	results # 3 of 9
333	100	19	1.22E-02
For Julian Day 100,	selecting	COMIDA2	results # 3 of 9
334	100	22	3.17E-03
For Julian Day 100,	selecting	COMIDA2	results # 3 of 9
335	102	8	3.17E-03
For Julian Day 102,	selecting	COMIDA2	results # 3 of 9
336	102	12	7.65E-03
For Julian Day 102,	selecting	COMIDA2	results # 3 of 9
337	104	14	2.47E-04
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

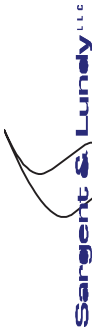
Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-98 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

338	104	17	22	7.23E-04
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9	
339	104	19	32	3.61E-04
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9	
340	105	2	21	2.40E-03
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9	
341	105	12	17	3.45E-03
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9	
342	105	14	26	2.95E-04
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9	
343	107	11	1	2.47E-04
For Julian Day 107,	selecting	COMIDA2	results # 3 of 9	
344	107	13	1	2.47E-04
For Julian Day 107,	selecting	COMIDA2	results # 3 of 9	
345	109	18	16	3.17E-03
For Julian Day 109,	selecting	COMIDA2	results # 3 of 9	
346	110	3	13	4.57E-04
For Julian Day 110,	selecting	COMIDA2	results # 3 of 9	
347	110	7	14	2.25E-03
For Julian Day 110,	selecting	COMIDA2	results # 3 of 9	
348	112	7	5	6.36E-03
For Julian Day 112,	selecting	COMIDA2	results # 3 of 9	
349	114	2	9	8.75E-04
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9	
350	114	14	31	2.85E-04
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9	

TRIAL	DAY	HOUR	BIN	PRBMET
351	114	15	31	2.85E-04
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9	
352	114	18	30	2.57E-04
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9	
353	114	19	29	1.14E-04
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9	



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-99 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

354	114	20	27	2.76E-04
	For Julian Day 114,	selecting COMIDA2	results # 3 of 9	
355	114	24	4	3.11E-03
	For Julian Day 114,	selecting COMIDA2	results # 3 of 9	
356	116	22	8	2.64E-03
	For Julian Day 116,	selecting COMIDA2	results # 3 of 9	
357	117	1	25	3.04E-04
	For Julian Day 117,	selecting COMIDA2	results # 3 of 9	
358	117	17	22	7.23E-04
	For Julian Day 117,	selecting COMIDA2	results # 3 of 9	
359	123	18	16	3.17E-03
	For Julian Day 123,	selecting COMIDA2	results # 3 of 9	
360	124	6	17	3.45E-03
	For Julian Day 124,	selecting COMIDA2	results # 3 of 9	
361	124	10	20	3.17E-03
	For Julian Day 124,	selecting COMIDA2	results # 3 of 9	
362	125	15	2	3.82E-03
	For Julian Day 125,	selecting COMIDA2	results # 3 of 9	
363	125	17	6	1.22E-02
	For Julian Day 125,	selecting COMIDA2	results # 3 of 9	
364	127	11	1	2.47E-04
	For Julian Day 127,	selecting COMIDA2	results # 3 of 9	
365	128	11	21	2.40E-03
	For Julian Day 128,	selecting COMIDA2	results # 3 of 9	
366	128	14	18	4.00E-04
	For Julian Day 128,	selecting COMIDA2	results # 3 of 9	
367	130	17	36	2.19E-04
	For Julian Day 130,	selecting COMIDA2	results # 3 of 9	
368	130	19	35	2.47E-04
	For Julian Day 130,	selecting COMIDA2	results # 3 of 9	
369	130	22	35	2.47E-04
	For Julian Day 130,	selecting COMIDA2	results # 3 of 9	
370	130	23	34	1.14E-04
	For Julian Day 130,	selecting COMIDA2	results # 3 of 9	
371	131	1	34	1.14E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-100 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 131, selecting COMIDA2 results # 3 of 9
 372 132 5 10 4.33E-03

For Julian Day 132, selecting COMIDA2 results # 3 of 9
 373 132 23 31 2.85E-04

For Julian Day 132, selecting COMIDA2 results # 3 of 9
 374 133 2 31 2.85E-04

For Julian Day 133, selecting COMIDA2 results # 3 of 9
 375 133 4 30 2.57E-04

For Julian Day 133, selecting COMIDA2 results # 3 of 9
 376 133 8 30 2.57E-04

For Julian Day 133, selecting COMIDA2 results # 3 of 9
 377 133 9 29 1.14E-04

For Julian Day 133, selecting COMIDA2 results # 3 of 9
 378 133 10 28 1.14E-04

For Julian Day 133, selecting COMIDA2 results # 3 of 9
 379 137 9 3 3.14E-04

For Julian Day 137, selecting COMIDA2 results # 4 of 9
 380 137 21 11 6.66E-03

For Julian Day 137, selecting COMIDA2 results # 4 of 9
 381 141 15 2 3.82E-03

For Julian Day 141, selecting COMIDA2 results # 4 of 9
 382 142 18 4 3.11E-03

For Julian Day 142, selecting COMIDA2 results # 4 of 9
 383 142 21 12 1.27E-02

For Julian Day 142, selecting COMIDA2 results # 4 of 9
 384 143 19 15 2.97E-03

For Julian Day 143, selecting COMIDA2 results # 4 of 9
 385 144 22 16 3.17E-03

For Julian Day 144, selecting COMIDA2 results # 4 of 9
 386 146 15 7 7.65E-03

For Julian Day 146, selecting COMIDA2 results # 4 of 9
 387 146 21 27 2.76E-04

For Julian Day 146, selecting COMIDA2 results # 4 of 9
 388 147 5 19 9.51E-04

For Julian Day 147, selecting COMIDA2 results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related

X

Non-Safety Related

Page 1.3-101 of 1.3-265

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

389 148 13 1 2.47E-04
 For Julian Day 148, selecting COMIDA2 results # 4 of 9
 390 149 10 5 6.36E-03
 For Julian Day 149, selecting COMIDA2 results # 4 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-102 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

WARNING!! WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 154, selecting COMIDA2 results # 4 of 9
 For Julian Day 155, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 158, selecting COMIDA2 results # 4 of 9
 For Julian Day 159, selecting COMIDA2 results # 4 of 9
 For Julian Day 159, selecting COMIDA2 results # 4 of 9
 For Julian Day 160, selecting COMIDA2 results # 4 of 9
 For Julian Day 160, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-104 of 1.3-265

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 183, selecting COMIDA2 results # 5 of 9
 For Julian Day 183, selecting COMIDA2 results # 5 of 9
 For Julian Day 185, selecting COMIDA2 results # 5 of 9
 For Julian Day 186, selecting COMIDA2 results # 5 of 9
 For Julian Day 186, selecting COMIDA2 results # 5 of 9
 For Julian Day 187, selecting COMIDA2 results # 5 of 9
 For Julian Day 187, selecting COMIDA2 results # 5 of 9
 For Julian Day 187, selecting COMIDA2 results # 5 of 9
 For Julian Day 189, selecting COMIDA2 results # 5 of 9
 For Julian Day 190, selecting COMIDA2 results # 5 of 9
 For Julian Day 190, selecting COMIDA2 results # 5 of 9
 For Julian Day 194, selecting COMIDA2 results # 6 of 9
 For Julian Day 194, selecting COMIDA2 results # 6 of 9
 For Julian Day 194, selecting COMIDA2 results # 6 of 9
 For Julian Day 194, selecting COMIDA2 results # 6 of 9
 For Julian Day 196, selecting COMIDA2 results # 6 of 9
 For Julian Day 196, selecting COMIDA2 results # 6 of 9
 For Julian Day 198, selecting COMIDA2 results # 6 of 9
 For Julian Day 200, selecting COMIDA2 results # 6 of 9
 For Julian Day 202, selecting COMIDA2 results # 6 of 9
 For Julian Day 204, selecting COMIDA2 results # 6 of 9
 For Julian Day 204, selecting COMIDA2 results # 6 of 9
 For Julian Day 206, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 210, selecting COMIDA2 results # 6 of 9
 For Julian Day 210, selecting COMIDA2 results # 6 of 9
 For Julian Day 210, selecting COMIDA2 results # 6 of 9
 For Julian Day 211, selecting COMIDA2 results # 6 of 9
 For Julian Day 215, selecting COMIDA2 results # 6 of 9
 For Julian Day 215, selecting COMIDA2 results # 6 of 9
 For Julian Day 216, selecting COMIDA2 results # 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-107 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 277,	selecting COMIDA2	results	# 8 of 9
For Julian Day 278,	selecting COMIDA2	results	# 8 of 9
For Julian Day 280,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 289,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 297,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-108 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-109 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-110 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-111 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9



Calcs. For **ENVIRONMENTAL CONSEQUENCE**
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-112 of 1.3-265

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related	Prepared by	Date
Project	PSEG ESPA				Reviewed by	Date
Proj. No	12380-001	Equip. No.			Approved by	Date

For Julian Day 105, selecting COMIDA2 results # 3 of 9
For Julian Day 107, selecting COMIDA2 results # 3 of 9
For Julian Day 107, selecting COMIDA2 results # 3 of 9
For Julian Day 109, selecting COMIDA2 results # 3 of 9
For Julian Day 110, selecting COMIDA2 results # 3 of 9
For Julian Day 110, selecting COMIDA2 results # 3 of 9
For Julian Day 112, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 116, selecting COMIDA2 results # 3 of 9
For Julian Day 117, selecting COMIDA2 results # 3 of 9
For Julian Day 117, selecting COMIDA2 results # 3 of 9
For Julian Day 123, selecting COMIDA2 results # 3 of 9
For Julian Day 124, selecting COMIDA2 results # 3 of 9
For Julian Day 124, selecting COMIDA2 results # 3 of 9
For Julian Day 125, selecting COMIDA2 results # 3 of 9
For Julian Day 125, selecting COMIDA2 results # 3 of 9
For Julian Day 127, selecting COMIDA2 results # 3 of 9
For Julian Day 128, selecting COMIDA2 results # 3 of 9
For Julian Day 128, selecting COMIDA2 results # 3 of 9
For Julian Day 130, selecting COMIDA2 results # 3 of 9
For Julian Day 130, selecting COMIDA2 results # 3 of 9
For Julian Day 130, selecting COMIDA2 results # 3 of 9
For Julian Day 130, selecting COMIDA2 results # 3 of 9
For Julian Day 131, selecting COMIDA2 results # 3 of 9
For Julian Day 132, selecting COMIDA2 results # 3 of 9
For Julian Day 132, selecting COMIDA2 results # 3 of 9
For Julian Day 133, selecting COMIDA2 results # 3 of 9
For Julian Day 133, selecting COMIDA2 results # 3 of 9
For Julian Day 133, selecting COMIDA2 results # 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-113 of 1.3-265

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 133, selecting COMIDA2 results # 3 of 9
 For Julian Day 133, selecting COMIDA2 results # 3 of 9
 For Julian Day 137, selecting COMIDA2 results # 4 of 9
 For Julian Day 137, selecting COMIDA2 results # 4 of 9
 For Julian Day 141, selecting COMIDA2 results # 4 of 9
 For Julian Day 141, selecting COMIDA2 results # 4 of 9
 For Julian Day 142, selecting COMIDA2 results # 4 of 9
 For Julian Day 142, selecting COMIDA2 results # 4 of 9
 For Julian Day 143, selecting COMIDA2 results # 4 of 9
 For Julian Day 143, selecting COMIDA2 results # 4 of 9
 For Julian Day 144, selecting COMIDA2 results # 4 of 9
 For Julian Day 144, selecting COMIDA2 results # 4 of 9
 For Julian Day 146, selecting COMIDA2 results # 4 of 9
 For Julian Day 146, selecting COMIDA2 results # 4 of 9
 For Julian Day 147, selecting COMIDA2 results # 4 of 9
 For Julian Day 147, selecting COMIDA2 results # 4 of 9
 For Julian Day 148, selecting COMIDA2 results # 4 of 9
 For Julian Day 148, selecting COMIDA2 results # 4 of 9
 For Julian Day 149, selecting COMIDA2 results # 4 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-114 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

WARNING!! WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

For Julian Day 152,	selecting COMIDA2 results	# 4 of 9
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9
For Julian Day 154,	selecting COMIDA2 results	# 4 of 9
For Julian Day 155,	selecting COMIDA2 results	# 4 of 9
For Julian Day 156,	selecting COMIDA2 results	# 4 of 9
For Julian Day 156,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 158,	selecting COMIDA2 results	# 4 of 9
For Julian Day 159,	selecting COMIDA2 results	# 4 of 9
For Julian Day 159,	selecting COMIDA2 results	# 4 of 9
For Julian Day 160,	selecting COMIDA2 results	# 4 of 9
For Julian Day 160,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-116 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-117 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	

For Julian Day 216,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 229,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting	COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-119 of 1.3-265

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 274, selecting COMIDA2 results # 8 of 9
 For Julian Day 274, selecting COMIDA2 results # 8 of 9
 For Julian Day 275, selecting COMIDA2 results # 8 of 9
 For Julian Day 276, selecting COMIDA2 results # 8 of 9
 For Julian Day 276, selecting COMIDA2 results # 8 of 9
 For Julian Day 277, selecting COMIDA2 results # 8 of 9
 For Julian Day 278, selecting COMIDA2 results # 8 of 9
 For Julian Day 280, selecting COMIDA2 results # 8 of 9
 For Julian Day 281, selecting COMIDA2 results # 8 of 9
 For Julian Day 281, selecting COMIDA2 results # 8 of 9
 For Julian Day 282, selecting COMIDA2 results # 8 of 9
 For Julian Day 282, selecting COMIDA2 results # 8 of 9
 For Julian Day 282, selecting COMIDA2 results # 8 of 9
 For Julian Day 285, selecting COMIDA2 results # 8 of 9
 For Julian Day 285, selecting COMIDA2 results # 8 of 9
 For Julian Day 289, selecting COMIDA2 results # 9 of 9
 For Julian Day 292, selecting COMIDA2 results # 9 of 9
 For Julian Day 292, selecting COMIDA2 results # 9 of 9
 For Julian Day 293, selecting COMIDA2 results # 9 of 9
 For Julian Day 293, selecting COMIDA2 results # 9 of 9
 For Julian Day 297, selecting COMIDA2 results # 9 of 9
 For Julian Day 299, selecting COMIDA2 results # 9 of 9
 For Julian Day 299, selecting COMIDA2 results # 9 of 9
 For Julian Day 300, selecting COMIDA2 results # 9 of 9
 For Julian Day 300, selecting COMIDA2 results # 9 of 9
 For Julian Day 301, selecting COMIDA2 results # 9 of 9
 For Julian Day 302, selecting COMIDA2 results # 9 of 9
 For Julian Day 304, selecting COMIDA2 results # 9 of 9
 For Julian Day 309, selecting COMIDA2 results # 9 of 9
 For Julian Day 309, selecting COMIDA2 results # 9 of 9
 For Julian Day 313, selecting COMIDA2 results # 9 of 9
 For Julian Day 314, selecting COMIDA2 results # 9 of 9
 For Julian Day 315, selecting COMIDA2 results # 9 of 9
 For Julian Day 315, selecting COMIDA2 results # 9 of 9
 For Julian Day 315, selecting COMIDA2 results # 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-120 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-121 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-122 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-123 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 74,	selecting COMIDA2 results	# 2 of 9
For Julian Day 75,	selecting COMIDA2 results	# 2 of 9
For Julian Day 76,	selecting COMIDA2 results	# 2 of 9
For Julian Day 78,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 81,	selecting COMIDA2 results	# 2 of 9
For Julian Day 84,	selecting COMIDA2 results	# 2 of 9
For Julian Day 85,	selecting COMIDA2 results	# 2 of 9
For Julian Day 86,	selecting COMIDA2 results	# 2 of 9
For Julian Day 87,	selecting COMIDA2 results	# 2 of 9
For Julian Day 89,	selecting COMIDA2 results	# 2 of 9
For Julian Day 90,	selecting COMIDA2 results	# 2 of 9
For Julian Day 91,	selecting COMIDA2 results	# 2 of 9
For Julian Day 94,	selecting COMIDA2 results	# 3 of 9
For Julian Day 95,	selecting COMIDA2 results	# 3 of 9
For Julian Day 96,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9



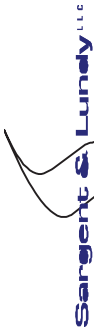
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-124 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 109,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-125 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 133,	selecting COMIDA2	results # 3	of 9
For Julian Day 133,	selecting COMIDA2	results # 3	of 9
For Julian Day 137,	selecting COMIDA2	results # 4	of 9
For Julian Day 137,	selecting COMIDA2	results # 4	of 9
For Julian Day 141,	selecting COMIDA2	results # 4	of 9
For Julian Day 142,	selecting COMIDA2	results # 4	of 9
For Julian Day 142,	selecting COMIDA2	results # 4	of 9
For Julian Day 143,	selecting COMIDA2	results # 4	of 9
For Julian Day 144,	selecting COMIDA2	results # 4	of 9
For Julian Day 146,	selecting COMIDA2	results # 4	of 9
For Julian Day 146,	selecting COMIDA2	results # 4	of 9
For Julian Day 147,	selecting COMIDA2	results # 4	of 9
For Julian Day 148,	selecting COMIDA2	results # 4	of 9
For Julian Day 149,	selecting COMIDA2	results # 4	of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-126 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date
	Date
	Date

WARNING!! WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 154, selecting COMIDA2 results # 4 of 9
 For Julian Day 155, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 158, selecting COMIDA2 results # 4 of 9
 For Julian Day 159, selecting COMIDA2 results # 4 of 9
 For Julian Day 159, selecting COMIDA2 results # 4 of 9
 For Julian Day 160, selecting COMIDA2 results # 4 of 9
 For Julian Day 160, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-128 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-131 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 274,	selecting COMIDA2	results # 8 of 9	
For Julian Day 274,	selecting COMIDA2	results # 8 of 9	
For Julian Day 275,	selecting COMIDA2	results # 8 of 9	
For Julian Day 276,	selecting COMIDA2	results # 8 of 9	
For Julian Day 276,	selecting COMIDA2	results # 8 of 9	
For Julian Day 277,	selecting COMIDA2	results # 8 of 9	
For Julian Day 278,	selecting COMIDA2	results # 8 of 9	
For Julian Day 280,	selecting COMIDA2	results # 8 of 9	
For Julian Day 281,	selecting COMIDA2	results # 8 of 9	
For Julian Day 281,	selecting COMIDA2	results # 8 of 9	
For Julian Day 282,	selecting COMIDA2	results # 8 of 9	
For Julian Day 282,	selecting COMIDA2	results # 8 of 9	
For Julian Day 282,	selecting COMIDA2	results # 8 of 9	
For Julian Day 285,	selecting COMIDA2	results # 8 of 9	
For Julian Day 285,	selecting COMIDA2	results # 8 of 9	
For Julian Day 289,	selecting COMIDA2	results # 9 of 9	
For Julian Day 292,	selecting COMIDA2	results # 9 of 9	
For Julian Day 292,	selecting COMIDA2	results # 9 of 9	
For Julian Day 293,	selecting COMIDA2	results # 9 of 9	
For Julian Day 293,	selecting COMIDA2	results # 9 of 9	
For Julian Day 297,	selecting COMIDA2	results # 9 of 9	
For Julian Day 299,	selecting COMIDA2	results # 9 of 9	
For Julian Day 299,	selecting COMIDA2	results # 9 of 9	
For Julian Day 300,	selecting COMIDA2	results # 9 of 9	
For Julian Day 300,	selecting COMIDA2	results # 9 of 9	
For Julian Day 301,	selecting COMIDA2	results # 9 of 9	
For Julian Day 302,	selecting COMIDA2	results # 9 of 9	
For Julian Day 304,	selecting COMIDA2	results # 9 of 9	
For Julian Day 309,	selecting COMIDA2	results # 9 of 9	
For Julian Day 309,	selecting COMIDA2	results # 9 of 9	
For Julian Day 313,	selecting COMIDA2	results # 9 of 9	
For Julian Day 314,	selecting COMIDA2	results # 9 of 9	
For Julian Day 315,	selecting COMIDA2	results # 9 of 9	
For Julian Day 315,	selecting COMIDA2	results # 9 of 9	
For Julian Day 315,	selecting COMIDA2	results # 9 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-132 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-133 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-134 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-135 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 74,	selecting COMIDA2 results	# 2 of 9
For Julian Day 75,	selecting COMIDA2 results	# 2 of 9
For Julian Day 76,	selecting COMIDA2 results	# 2 of 9
For Julian Day 78,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 81,	selecting COMIDA2 results	# 2 of 9
For Julian Day 84,	selecting COMIDA2 results	# 2 of 9
For Julian Day 85,	selecting COMIDA2 results	# 2 of 9
For Julian Day 86,	selecting COMIDA2 results	# 2 of 9
For Julian Day 87,	selecting COMIDA2 results	# 2 of 9
For Julian Day 89,	selecting COMIDA2 results	# 2 of 9
For Julian Day 90,	selecting COMIDA2 results	# 2 of 9
For Julian Day 91,	selecting COMIDA2 results	# 2 of 9
For Julian Day 94,	selecting COMIDA2 results	# 3 of 9
For Julian Day 95,	selecting COMIDA2 results	# 3 of 9
For Julian Day 96,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9



Calcs. For **ENVIRONMENTAL CONSEQUENCE**
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-136 of 1.3-265

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related	Prepared by	Date
Project	PSEG ESPA				Reviewed by	Date
Proj. No	12380-001	Equip. No.			Approved by	Date

For Julian Day 105, selecting COMIDA2 results # 3 of 9
For Julian Day 107, selecting COMIDA2 results # 3 of 9
For Julian Day 107, selecting COMIDA2 results # 3 of 9
For Julian Day 109, selecting COMIDA2 results # 3 of 9
For Julian Day 110, selecting COMIDA2 results # 3 of 9
For Julian Day 110, selecting COMIDA2 results # 3 of 9
For Julian Day 112, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 116, selecting COMIDA2 results # 3 of 9
For Julian Day 117, selecting COMIDA2 results # 3 of 9
For Julian Day 117, selecting COMIDA2 results # 3 of 9
For Julian Day 123, selecting COMIDA2 results # 3 of 9
For Julian Day 124, selecting COMIDA2 results # 3 of 9
For Julian Day 124, selecting COMIDA2 results # 3 of 9
For Julian Day 125, selecting COMIDA2 results # 3 of 9
For Julian Day 125, selecting COMIDA2 results # 3 of 9
For Julian Day 127, selecting COMIDA2 results # 3 of 9
For Julian Day 128, selecting COMIDA2 results # 3 of 9
For Julian Day 128, selecting COMIDA2 results # 3 of 9
For Julian Day 130, selecting COMIDA2 results # 3 of 9
For Julian Day 130, selecting COMIDA2 results # 3 of 9
For Julian Day 130, selecting COMIDA2 results # 3 of 9
For Julian Day 130, selecting COMIDA2 results # 3 of 9
For Julian Day 131, selecting COMIDA2 results # 3 of 9
For Julian Day 132, selecting COMIDA2 results # 3 of 9
For Julian Day 132, selecting COMIDA2 results # 3 of 9
For Julian Day 133, selecting COMIDA2 results # 3 of 9
For Julian Day 133, selecting COMIDA2 results # 3 of 9
For Julian Day 133, selecting COMIDA2 results # 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-137 of 1.3-265

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 133, selecting COMIDA2 results # 3 of 9
 For Julian Day 133, selecting COMIDA2 results # 3 of 9
 For Julian Day 137, selecting COMIDA2 results # 4 of 9
 For Julian Day 137, selecting COMIDA2 results # 4 of 9
 For Julian Day 141, selecting COMIDA2 results # 4 of 9
 For Julian Day 142, selecting COMIDA2 results # 4 of 9
 For Julian Day 142, selecting COMIDA2 results # 4 of 9
 For Julian Day 143, selecting COMIDA2 results # 4 of 9
 For Julian Day 144, selecting COMIDA2 results # 4 of 9
 For Julian Day 146, selecting COMIDA2 results # 4 of 9
 For Julian Day 146, selecting COMIDA2 results # 4 of 9
 For Julian Day 147, selecting COMIDA2 results # 4 of 9
 For Julian Day 148, selecting COMIDA2 results # 4 of 9
 For Julian Day 149, selecting COMIDA2 results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

WARNING!! WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 154, selecting COMIDA2 results # 4 of 9
 For Julian Day 155, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 158, selecting COMIDA2 results # 4 of 9
 For Julian Day 159, selecting COMIDA2 results # 4 of 9
 For Julian Day 159, selecting COMIDA2 results # 4 of 9
 For Julian Day 160, selecting COMIDA2 results # 4 of 9
 For Julian Day 160, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-140 of 1.3-265

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 183, selecting COMIDA2 results # 5 of 9
 For Julian Day 183, selecting COMIDA2 results # 5 of 9
 For Julian Day 185, selecting COMIDA2 results # 5 of 9
 For Julian Day 186, selecting COMIDA2 results # 5 of 9
 For Julian Day 186, selecting COMIDA2 results # 5 of 9
 For Julian Day 187, selecting COMIDA2 results # 5 of 9
 For Julian Day 187, selecting COMIDA2 results # 5 of 9
 For Julian Day 187, selecting COMIDA2 results # 5 of 9
 For Julian Day 189, selecting COMIDA2 results # 5 of 9
 For Julian Day 190, selecting COMIDA2 results # 5 of 9
 For Julian Day 190, selecting COMIDA2 results # 5 of 9
 For Julian Day 194, selecting COMIDA2 results # 6 of 9
 For Julian Day 194, selecting COMIDA2 results # 6 of 9
 For Julian Day 194, selecting COMIDA2 results # 6 of 9
 For Julian Day 194, selecting COMIDA2 results # 6 of 9
 For Julian Day 196, selecting COMIDA2 results # 6 of 9
 For Julian Day 196, selecting COMIDA2 results # 6 of 9
 For Julian Day 198, selecting COMIDA2 results # 6 of 9
 For Julian Day 200, selecting COMIDA2 results # 6 of 9
 For Julian Day 202, selecting COMIDA2 results # 6 of 9
 For Julian Day 204, selecting COMIDA2 results # 6 of 9
 For Julian Day 204, selecting COMIDA2 results # 6 of 9
 For Julian Day 206, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 210, selecting COMIDA2 results # 6 of 9
 For Julian Day 210, selecting COMIDA2 results # 6 of 9
 For Julian Day 210, selecting COMIDA2 results # 6 of 9
 For Julian Day 210, selecting COMIDA2 results # 6 of 9
 For Julian Day 211, selecting COMIDA2 results # 6 of 9
 For Julian Day 215, selecting COMIDA2 results # 6 of 9
 For Julian Day 215, selecting COMIDA2 results # 6 of 9
 For Julian Day 216, selecting COMIDA2 results # 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-143 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 277,	selecting COMIDA2	results	# 8 of 9
For Julian Day 278,	selecting COMIDA2	results	# 8 of 9
For Julian Day 280,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 289,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 297,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-144 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-145 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-146 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9



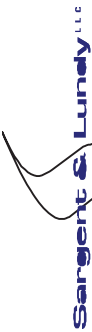
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-147 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

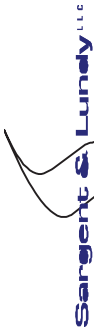
Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.3-148 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

For Julian Day 105, selecting COMIDA2 results # 3 of 9
For Julian Day 107, selecting COMIDA2 results # 3 of 9
For Julian Day 107, selecting COMIDA2 results # 3 of 9
For Julian Day 109, selecting COMIDA2 results # 3 of 9
For Julian Day 110, selecting COMIDA2 results # 3 of 9
For Julian Day 110, selecting COMIDA2 results # 3 of 9
For Julian Day 112, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 114, selecting COMIDA2 results # 3 of 9
For Julian Day 116, selecting COMIDA2 results # 3 of 9
For Julian Day 117, selecting COMIDA2 results # 3 of 9
For Julian Day 117, selecting COMIDA2 results # 3 of 9
For Julian Day 123, selecting COMIDA2 results # 3 of 9
For Julian Day 124, selecting COMIDA2 results # 3 of 9
For Julian Day 124, selecting COMIDA2 results # 3 of 9
For Julian Day 125, selecting COMIDA2 results # 3 of 9
For Julian Day 125, selecting COMIDA2 results # 3 of 9
For Julian Day 127, selecting COMIDA2 results # 3 of 9
For Julian Day 128, selecting COMIDA2 results # 3 of 9
For Julian Day 128, selecting COMIDA2 results # 3 of 9
For Julian Day 130, selecting COMIDA2 results # 3 of 9
For Julian Day 130, selecting COMIDA2 results # 3 of 9
For Julian Day 130, selecting COMIDA2 results # 3 of 9
For Julian Day 130, selecting COMIDA2 results # 3 of 9
For Julian Day 131, selecting COMIDA2 results # 3 of 9
For Julian Day 132, selecting COMIDA2 results # 3 of 9
For Julian Day 132, selecting COMIDA2 results # 3 of 9
For Julian Day 133, selecting COMIDA2 results # 3 of 9
For Julian Day 133, selecting COMIDA2 results # 3 of 9
For Julian Day 133, selecting COMIDA2 results # 3 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-149 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting COMIDA2	results	# 4 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-150 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date
	Date
	Date

WARNING!! WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 154, selecting COMIDA2 results # 4 of 9
 For Julian Day 155, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 158, selecting COMIDA2 results # 4 of 9
 For Julian Day 159, selecting COMIDA2 results # 4 of 9
 For Julian Day 159, selecting COMIDA2 results # 4 of 9
 For Julian Day 160, selecting COMIDA2 results # 4 of 9
 For Julian Day 160, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9
 For Julian Day 162, selecting COMIDA2 results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-152 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-155 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 277,	selecting COMIDA2	results	# 8 of 9
For Julian Day 278,	selecting COMIDA2	results	# 8 of 9
For Julian Day 280,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 289,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 297,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-156 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9
For Julian Day 330,	selecting COMIDA2 results	# 9 of 9
For Julian Day 331,	selecting COMIDA2 results	# 9 of 9
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9
For Julian Day 343,	selecting COMIDA2 results	# 1 of 9
For Julian Day 344,	selecting COMIDA2 results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-157 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-158 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.3-159 of 1.3-265	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 74,	selecting COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-160 of 1.3-265

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 105, selecting COMIDA2 results # 3 of 9
 For Julian Day 107, selecting COMIDA2 results # 3 of 9
 For Julian Day 107, selecting COMIDA2 results # 3 of 9
 For Julian Day 109, selecting COMIDA2 results # 3 of 9
 For Julian Day 110, selecting COMIDA2 results # 3 of 9
 For Julian Day 110, selecting COMIDA2 results # 3 of 9
 For Julian Day 112, selecting COMIDA2 results # 3 of 9
 For Julian Day 114, selecting COMIDA2 results # 3 of 9
 For Julian Day 114, selecting COMIDA2 results # 3 of 9
 For Julian Day 114, selecting COMIDA2 results # 3 of 9
 For Julian Day 114, selecting COMIDA2 results # 3 of 9
 For Julian Day 114, selecting COMIDA2 results # 3 of 9
 For Julian Day 114, selecting COMIDA2 results # 3 of 9
 For Julian Day 114, selecting COMIDA2 results # 3 of 9
 For Julian Day 114, selecting COMIDA2 results # 3 of 9
 For Julian Day 116, selecting COMIDA2 results # 3 of 9
 For Julian Day 117, selecting COMIDA2 results # 3 of 9
 For Julian Day 117, selecting COMIDA2 results # 3 of 9
 For Julian Day 123, selecting COMIDA2 results # 3 of 9
 For Julian Day 124, selecting COMIDA2 results # 3 of 9
 For Julian Day 124, selecting COMIDA2 results # 3 of 9
 For Julian Day 125, selecting COMIDA2 results # 3 of 9
 For Julian Day 125, selecting COMIDA2 results # 3 of 9
 For Julian Day 127, selecting COMIDA2 results # 3 of 9
 For Julian Day 128, selecting COMIDA2 results # 3 of 9
 For Julian Day 128, selecting COMIDA2 results # 3 of 9
 For Julian Day 130, selecting COMIDA2 results # 3 of 9
 For Julian Day 130, selecting COMIDA2 results # 3 of 9
 For Julian Day 130, selecting COMIDA2 results # 3 of 9
 For Julian Day 130, selecting COMIDA2 results # 3 of 9
 For Julian Day 131, selecting COMIDA2 results # 3 of 9
 For Julian Day 132, selecting COMIDA2 results # 3 of 9
 For Julian Day 132, selecting COMIDA2 results # 3 of 9
 For Julian Day 133, selecting COMIDA2 results # 3 of 9
 For Julian Day 133, selecting COMIDA2 results # 3 of 9
 For Julian Day 133, selecting COMIDA2 results # 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.3-161 of 1.3-265

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 137,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting	COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = US-APWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 1 OF 6:
 RC1

OVERALL RESULTS OBTAINED BY COMBINING 2 EMERGENCY RESPONSE COHORTS FROM "EARLY" WITH THE WEIGHTING FRACTIONS BELOW APPLIED TO THEM:

COHORT 1 = 95% EVACUATION
 COHORT 2 = NO EVACUATION

FRACTION OF THE PEOPLE

 0.950
 0.050

AND THEN MERGING THE 2 RESULTS ABOVE WITH THE SINGLE SET OF RESULTS FROM "CHRONC" DESCRIBED BELOW:
 COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 RESULTS WHICH ARE PRODUCED ONLY BY "EARLY" OR ONLY BY "CHRONC" ARE PRESENTED IN LATER SECTIONS.

10-JAN-10 17:35:21	PAGE 1	PROB	QUANTILES	PEAK	PEAK					
		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES	0-80.5 km	1.0000	6.16E+03	4.67E+03	1.12E+04	1.25E+04	1.59E+04	1.76E+04	2.79E+04	1.19E-
CAN FAT/TOTAL	0-16.1 km	1.0000	1.50E+02	1.21E+02	2.72E+02	3.25E+02	4.52E+02	5.21E+02	1.36E+03	1.36E-
ERL FAT/TOTAL	0-80.5 km	0.0485	3.42E-04	0.00E+00	0.00E+00	0.00E+00	5.78E-03	1.17E-02	5.65E-01	4.76E-



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			Rev. 2	Date
Safety Related	X	Non-Safety Related	Page 1.3-164 of 1.3-265	
Client PSEG Nuclear Development		Prepared by	Date	
Project PSEG ESPA		Reviewed by	Date	
Proj. No 12380-001		Approved by	Date	
Equip. No.				

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = US-APWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 1 OF 6:
 RC1

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

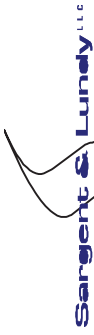
COHORT 1 = 95% EVACUATION

10-JAN-10 17:35:21	PAGE 2	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.44E+03	9.13E+02	3.39E+03	4.13E+03	5.79E+03	6.46E+03	8.75E+03	1.33E-
04 334										
CAN FAT/TOTAL	0-16.1 km	0.9905	4.67E+01	1.93E+01	1.20E+02	1.72E+02	3.13E+02	3.85E+02	1.26E+03	1.36E-
04 365										
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.2612	4.48E+00	0.00E+00	0.00E+00	7.51E+00	2.10E+01	1.04E+02	1.33E+02	2.90E+02	5.71E-
05 346										
EARLY dose L-EDEWBODY > 0.250 Sv	0.8429	7.96E+03	2.42E+02	2.06E+04	7.10E+04	8.44E+04	9.10E+04	1.12E+05	8.66E-	
04 318										

POPULATION DOSE (Sv)

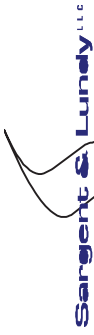


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.3-165 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 04 365	0-16.1 km	0.9905	5.87E+02	2.55E+02	1.50E+03	2.14E+03	3.65E+03	4.40E+03	1.40E+04	1.36E-
L-EDEWBODY TOT LIF 04 334	0-80.5 km	1.0000	2.55E+04	1.65E+04	5.88E+04	7.14E+04	8.96E+04	9.88E+04	1.40E+05	1.33E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 334	0-80.5 km	1.0000	1.77E-04	1.12E-04	4.18E-04	5.26E-04	7.04E-04	7.45E-04	1.07E-03	1.33E-
CAN FAT/TOTAL 04 365	0-16.1 km	0.9905	7.68E-04	3.11E-04	2.04E-03	2.89E-03	5.18E-03	6.18E-03	2.07E-02	1.36E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 03 208	0-1.6 km	1.0000	2.38E+01	1.88E+01	4.45E+01	5.85E+01	1.08E+02	1.34E+02	1.72E+02	2.25E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.3-167 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 210	0-16.1 km	1.0000	2.33E+03	1.38E+03	5.40E+03	7.28E+03	1.34E+04	1.69E+04	3.04E+04	1.90E-
L-EDEWBODY TOT LIF 04 334	0-80.5 km	1.0000	2.73E+04	1.86E+04	6.21E+04	7.40E+04	9.51E+04	1.03E+05	1.44E+05	1.33E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 05 349	0-80.5 km	0.0485	8.41E-10	0.00E+00	0.00E+00	0.00E+00	1.36E-08	2.90E-08	1.39E-06	4.76E-
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL 05 349	3.2-4.8 km	0.0427	4.10E-05	0.00E+00	0.00E+00	0.00E+00	5.49E-04	1.35E-03	5.76E-02	4.76E-
CAN FAT/TOTAL 04 334	0-80.5 km	1.0000	1.95E-04	1.28E-04	4.44E-04	5.46E-04	7.23E-04	7.62E-04	1.11E-03	1.33E-
CAN FAT/TOTAL 05 210	0-16.1 km	1.0000	3.16E-03	1.89E-03	7.54E-03	1.03E-02	2.08E-02	2.54E-02	4.50E-02	1.90E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 176	0-1.6 km	1.0000	5.72E+01	4.45E+01	1.06E+02	1.35E+02	2.31E+02	2.83E+02	4.19E+02	4.57E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-168 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = US-APWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

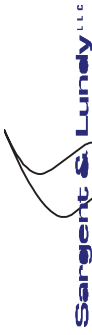
SOURCE TERM 1 OF 6:
RC1

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:35:21	PAGE 4	PROB	QUANTILES					PEAK	PEAK	
		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PROB
TRIAL										
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	4.71E+03	3.53E+03	1.01E+04	1.09E+04	1.31E+04	1.42E+04	2.40E+04	1.19E-
04 115										
CAN FAT/TOTAL	0-16.1 km	1.0000	9.62E+01	8.20E+01	1.68E+02	2.08E+02	2.71E+02	3.03E+02	4.53E+02	1.78E-
04 219										
POPULATION DOSE (Sv)										
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	2.12E+03	1.77E+03	3.77E+03	4.65E+03	6.03E+03	6.64E+03	9.88E+03	1.78E-
04 219										
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.08E+05	8.26E+04	2.18E+05	2.48E+05	3.18E+05	3.41E+05	5.47E+05	1.19E-
04 115										
POPULATION WEIGHTED RISK										
CAN FAT/TOTAL	0-80.5 km	1.0000	4.90E-04	3.72E-04	1.02E-03	1.10E-03	1.29E-03	1.39E-03	2.25E-03	1.19E-
04 115										
CAN FAT/TOTAL	0-16.1 km	1.0000	7.64E-04	6.48E-04	1.39E-03	1.75E-03	2.18E-03	2.29E-03	3.07E-03	1.24E-
04 3										

PEAK DOSE FOUND ON SPATIAL GRID (Sv)



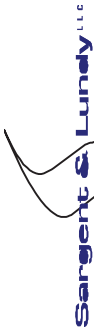
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.3-169 of 1.3-265	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 03 49	0-1.6 km	0.7841	7.67E-02	8.73E-02	1.07E-01	1.11E-01	1.19E-01	1.23E-01	1.27E-01	2.64E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 219	0-16.1 km	1.0000	2.12E+03	1.77E+03	3.77E+03	4.65E+03	6.03E+03	6.64E+03	9.88E+03	1.78E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 3		1.0000	1.07E+03	9.10E+02	2.07E+03	2.44E+03	3.16E+03	3.31E+03	4.29E+03	1.24E-
TOTAL INGESTION PATHWAYS DOSE 05 369		1.0000	5.98E+02	4.55E+02	1.16E+03	1.55E+03	2.52E+03	2.96E+03	4.70E+03	1.28E-
LONG-TERM GROUNDSHINE DOSE 04 3		1.0000	9.69E+02	8.05E+02	1.93E+03	2.31E+03	3.10E+03	3.26E+03	4.22E+03	1.24E-
LONG-TERM RESUSPENSION DOSE 04 79		1.0000	1.06E+02	7.78E+01	2.44E+02	3.07E+02	3.74E+02	4.07E+02	5.45E+02	4.38E-
WATER INGESTION DOSE 05 369		1.0000	5.56E+02	4.03E+02	1.12E+03	1.49E+03	2.49E+03	2.95E+03	4.67E+03	1.28E-
POP.-DEPENDENT DECONTAMINATION DOSE 06 27		1.0000	4.35E+02	2.77E+02	9.95E+02	1.33E+03	2.18E+03	2.40E+03	3.62E+03	5.90E-
FARM-DEPENDENT DECONTAMINATION DOSE 06 203		1.0000	1.38E+01	1.16E+01	2.30E+01	2.66E+01	3.22E+01	3.38E+01	5.23E+01	5.90E-
INGESTION OF GRAINS 05 200		1.0000	1.16E+00	1.04E+00	1.76E+00	2.08E+00	2.61E+00	2.88E+00	4.28E+00	3.35E-
INGESTION OF LEAF VEG 05 200		1.0000	9.40E+00	8.44E+00	1.44E+01	1.73E+01	2.15E+01	2.26E+01	3.53E+01	3.35E-
INGESTION OF ROOT CROPS 05 200		1.0000	5.98E+00	5.38E+00	1.01E+01	1.08E+01	1.25E+01	1.34E+01	2.23E+01	3.35E-
INGESTION OF FRUITS 05 200		1.0000	4.91E+00	4.50E+00	7.42E+00	8.22E+00	1.03E+01	1.12E+01	1.97E+01	3.35E-
INGESTION OF LEGUMES 05 200		1.0000	1.13E+01	1.02E+01	1.88E+01	2.14E+01	2.61E+01	2.84E+01	4.27E+01	3.35E-
INGESTION OF BEEF 04 304		1.0000	3.07E+00	2.49E+00	5.51E+00	7.03E+00	9.47E+00	1.02E+01	1.23E+01	1.52E-
INGESTION OF MILK 04 262		1.0000	4.82E+00	4.31E+00	7.62E+00	8.56E+00	1.08E+01	1.16E+01	1.47E+01	5.90E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page		1.3-170 of 1.3-265	

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
		Approved by		Date	

INGESTION OF POULTRY 04 170	1.0000	8.67E-01	7.00E-01	1.58E+00	2.05E+00	2.60E+00	2.89E+00	4.51E+00	3.18E-
INGESTION OF OTHER MEAT CROPS 06 204	1.0000	3.24E-01	3.03E-01	5.29E-01	6.08E-01	7.63E-01	8.15E-01	1.20E+00	4.07E-
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km TOTAL LONG-TERM PATHWAYS DOSE 04 115	1.0000	1.08E+05	8.26E+04	2.18E+05	2.48E+05	3.18E+05	3.41E+05	5.47E+05	1.19E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 115	1.0000	9.14E+04	7.21E+04	1.93E+05	2.13E+05	2.51E+05	2.69E+05	4.16E+05	1.19E-
TOTAL INGESTION PATHWAYS DOSE 05 11	1.0000	1.95E+03	1.56E+03	3.08E+03	3.57E+03	5.03E+03	5.48E+03	8.08E+03	1.03E-
LONG-TERM GROUNDSHINE DOSE 04 115	1.0000	8.30E+04	6.15E+04	1.71E+05	2.07E+05	2.43E+05	2.60E+05	4.10E+05	1.19E-
LONG-TERM RESUSPENSION DOSE 03 287	1.0000	8.36E+03	5.90E+03	1.79E+04	2.25E+04	3.17E+04	3.49E+04	4.34E+04	1.04E-
WATER INGESTION DOSE 05 11	1.0000	1.33E+03	1.06E+03	2.45E+03	3.08E+03	4.07E+03	4.58E+03	7.32E+03	1.03E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

MILK DISPOSAL AREA (HECTARES)	1.0000	1.71E+05	1.45E+05	2.79E+05	3.10E+05	3.51E+05	3.70E+05	4.61E+05	2.81E-04
CROP DISPOSAL AREA (HECTARES)	1.0000	1.92E+05	1.70E+05	3.05E+05	3.21E+05	3.61E+05	3.80E+05	4.71E+05	2.81E-04



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-174 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
	Date
	Date
	Date

MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 6

SOURCE TERM 1 OF 6:
RC1

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-05	1.00E+00	1.00E-05	1.00E-07
2.00E-05	1.00E+00	2.00E-05	2.00E-07
3.00E-05	1.00E+00	3.00E-05	3.00E-07
5.00E-05	1.00E+00	5.00E-05	5.00E-07
7.00E-05	1.00E+00	7.00E-05	7.00E-07
1.00E-04	1.00E+00	1.00E-04	1.00E-06
2.00E-04	1.00E+00	2.00E-04	2.00E-06
3.00E-04	1.00E+00	3.00E-04	3.00E-06
5.00E-04	1.00E+00	5.00E-04	5.00E-06
7.00E-04	1.00E+00	7.00E-04	7.00E-06
1.00E-03	1.00E+00	1.00E-03	1.00E-05
2.00E-03	1.00E+00	2.00E-03	2.00E-05
3.00E-03	1.00E+00	3.00E-03	3.00E-05
5.00E-03	1.00E+00	5.00E-03	5.00E-05
7.00E-03	1.00E+00	7.00E-03	7.00E-05
1.00E-02	1.00E+00	1.00E-02	1.00E-04
2.00E-02	1.00E+00	2.00E-02	2.00E-04
3.00E-02	1.00E+00	3.00E-02	3.00E-04
5.00E-02	1.00E+00	5.00E-02	5.00E-04
7.00E-02	1.00E+00	7.00E-02	7.00E-04
1.00E-01	1.00E+00	1.00E-01	1.00E-03
2.00E-01	9.89E-01	2.00E-01	2.00E-03



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			Rev. 2	Date
Safety Related	X	Non-Safety Related	Page 1.3-182 of 1.3-265	
Client PSEG Nuclear Development		Prepared by	Date	
Project PSEG ESPA		Reviewed by	Date	
Proj. No 12380-001		Approved by	Date	
Equip. No.				

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = US-APWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 2 OF 6:
 RC2

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

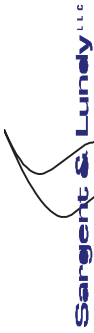
COHORT 1 = 95% EVACUATION

10-JAN-10 17:35:21	PAGE 8	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.82E+03	1.00E+03	4.74E+03	5.96E+03	8.53E+03	9.72E+03	1.27E+04	9.51E-
06 172	0-16.1 km	0.9890	2.75E+01	1.06E+01	7.45E+01	1.04E+02	2.00E+02	2.31E+02	5.75E+02	2.85E-
05 318	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL										
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0764	6.28E-01	0.00E+00	0.00E+00	9.96E-01	2.11E+01	3.53E+01	1.64E+02	9.51E-
06 345									
EARLY dose L-EDEWBODY > 0.250 Sv	0.7928	1.08E+04	1.34E+02	2.97E+04	7.82E+04	1.10E+05	1.24E+05	1.69E+05	8.09E-
04 23									

POPULATION DOSE (Sv)

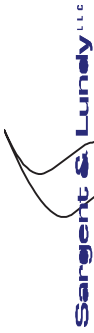


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.3-183 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 318	0-16.1 km	0.9890	3.46E+02	1.44E+02	9.28E+02	1.24E+03	2.25E+03	2.82E+03	6.23E+03	2.85E-
L-EDEWBODY TOT LIF 06 172	0-80.5 km	1.0000	2.83E+04	1.66E+04	7.06E+04	8.46E+04	1.07E+05	1.13E+05	1.79E+05	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 06 172	0-80.5 km	1.0000	2.24E-04	1.23E-04	5.74E-04	7.41E-04	1.03E-03	1.07E-03	1.56E-03	9.51E-
CAN FAT/TOTAL 05 318	0-16.1 km	0.9890	4.52E-04	1.70E-04	1.19E-03	1.68E-03	3.18E-03	3.72E-03	9.44E-03	9.51E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 03 175	0-1.6 km	1.0000	1.37E+01	1.03E+01	2.60E+01	3.34E+01	5.33E+01	6.68E+01	8.99E+01	4.33E-



Calcs. For ENVIRONMENTAL CONSEQUENCE				Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				Rev. 2	Date
Safety Related	X	Non-Safety Related		Page 1.3-185 of 1.3-265	
Client PSEG Nuclear Development			Prepared by		
Project PSEG ESPA			Reviewed by		
Proj. No 12380-001			Approved by		
Equip. No.			Date		

L-EDEWBODY 05 168	TOT LIF	0-16.1 km	1.0000	2.45E+03	1.32E+03	5.92E+03	8.07E+03	1.52E+04	2.00E+04	3.93E+04	1.90E-
L-EDEWBODY 06 172	TOT LIF	0-80.5 km	1.0000	3.04E+04	1.90E+04	7.32E+04	8.78E+04	1.09E+05	1.15E+05	1.86E+05	9.51E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL 05 176		0-80.5 km	0.0010	2.25E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-08	5.71E-
ERL FAT/TOTAL 0.00E+00		0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00		0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 05 176		3.2-4.8 km	0.0010	1.57E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.23E-04	5.71E-
CAN FAT/TOTAL 06 172		0-80.5 km	1.0000	2.48E-04	1.44E-04	6.15E-04	7.76E-04	1.04E-03	1.09E-03	1.63E-03	9.51E-
CAN FAT/TOTAL 05 168		0-16.1 km	1.0000	3.65E-03	1.98E-03	8.92E-03	1.24E-02	2.55E-02	3.19E-02	6.20E-02	1.90E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 03 175		0-1.6 km	1.0000	6.51E+01	4.99E+01	1.26E+02	1.66E+02	2.98E+02	4.33E+02	4.68E+02	4.33E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.3-186	of	1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = US-APWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 2 OF 6:
 RC2

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:35:21	PAGE 10	PROB	QUANTILES					PEAK	PEAK	
PEAK	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB	
TRIAL										
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	3.39E+03	3.02E+03	6.46E+03	7.27E+03	8.33E+03	8.83E+03	1.09E+04	2.66E-
04 39										
CAN FAT/TOTAL	0-16.1 km	1.0000	8.78E+01	7.83E+01	1.43E+02	1.73E+02	2.36E+02	2.63E+02	3.94E+02	1.24E-
05 25										
POPULATION DOSE (Sv)										
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	1.98E+03	1.71E+03	3.45E+03	4.05E+03	5.52E+03	6.09E+03	9.11E+03	1.24E-
05 25										
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	7.77E+04	6.91E+04	1.27E+05	1.48E+05	2.02E+05	2.11E+05	2.50E+05	2.66E-
04 39										
POPULATION WEIGHTED RISK										
CAN FAT/TOTAL	0-80.5 km	1.0000	3.80E-04	3.22E-04	7.22E-04	7.92E-04	9.83E-04	1.03E-03	1.22E-03	2.47E-
04 382										
CAN FAT/TOTAL	0-16.1 km	1.0000	8.75E-04	7.82E-04	1.41E-03	1.69E-03	2.08E-03	2.15E-03	2.84E-03	6.46E-
06 213										

PEAK DOSE FOUND ON SPATIAL GRID (SV)



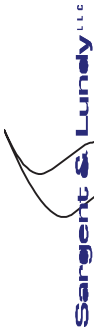
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.3-187 of 1.3-265	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 03 28	0-1.6 km	0.7255	7.78E-02	1.01E-01	1.09E-01	1.13E-01	1.22E-01	1.26E-01	1.29E-01	3.30E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 25	0-16.1 km	1.0000	1.98E+03	1.71E+03	3.45E+03	4.05E+03	5.52E+03	6.09E+03	9.11E+03	1.24E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 06 213		1.0000	1.22E+03	1.07E+03	2.18E+03	2.44E+03	3.04E+03	3.12E+03	3.99E+03	6.46E-
TOTAL INGESTION PATHWAYS DOSE 04 217		1.0000	1.94E+02	1.63E+02	3.14E+02	3.62E+02	5.01E+02	5.63E+02	8.12E+02	1.64E-
LONG-TERM GROUNDSHINE DOSE 06 213		1.0000	1.15E+03	1.03E+03	2.11E+03	2.35E+03	3.00E+03	3.08E+03	3.87E+03	6.46E-
LONG-TERM RESUSPENSION DOSE 06 203		1.0000	7.33E+01	6.01E+01	1.38E+02	1.74E+02	2.31E+02	2.51E+02	3.43E+02	5.74E-
WATER INGESTION DOSE 05 168		1.0000	1.40E+02	1.13E+02	2.54E+02	3.12E+02	4.34E+02	5.01E+02	7.64E+02	6.66E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 25		1.0000	5.45E+02	4.05E+02	1.12E+03	1.42E+03	2.40E+03	2.96E+03	5.19E+03	1.24E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 160		1.0000	1.61E+01	1.34E+01	2.52E+01	2.98E+01	3.27E+01	3.39E+01	4.72E+01	1.11E-
INGESTION OF GRAINS 05 202		1.0000	1.50E+00	1.25E+00	2.15E+00	2.35E+00	2.88E+00	3.09E+00	5.01E+00	1.33E-
INGESTION OF LEAF VEG 05 202		1.0000	1.31E+01	1.13E+01	1.94E+01	2.13E+01	2.53E+01	2.72E+01	4.51E+01	1.33E-
INGESTION OF ROOT CROPS 05 202		1.0000	8.35E+00	7.80E+00	1.14E+01	1.25E+01	1.54E+01	1.69E+01	2.78E+01	1.33E-
INGESTION OF FRUITS 05 202		1.0000	5.91E+00	5.50E+00	8.51E+00	9.71E+00	1.13E+01	1.20E+01	2.05E+01	1.33E-
INGESTION OF LEGUMES 05 202		1.0000	1.58E+01	1.32E+01	2.28E+01	2.55E+01	3.16E+01	3.35E+01	5.46E+01	1.33E-
INGESTION OF BEEF 05 311		1.0000	3.20E+00	2.62E+00	5.84E+00	7.03E+00	8.02E+00	8.50E+00	1.29E+01	1.62E-
INGESTION OF MILK 05 311		1.0000	5.38E+00	5.12E+00	7.87E+00	8.76E+00	1.03E+01	1.06E+01	1.32E+01	1.62E-

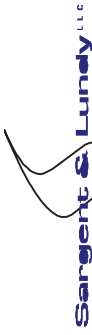


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-188 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
INGESTION OF POULTRY 05 178	1.0000		7.87E-01	7.18E-01	1.22E+00	1.48E+00	2.15E+00	2.39E+00	4.98E+00	5.71E-
INGESTION OF OTHER MEAT CROPS 05 202	1.0000		3.97E-01	3.52E-01	5.76E-01	6.52E-01	8.02E-01	8.67E-01	1.27E+00	1.33E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 39	1.0000		7.77E+04	6.91E+04	1.27E+05	1.48E+05	2.02E+05	2.11E+05	2.50E+05	2.66E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 382	1.0000		7.10E+04	5.99E+04	1.16E+05	1.30E+05	1.69E+05	1.89E+05	2.27E+05	2.47E-
TOTAL INGESTION PATHWAYS DOSE 04 85	1.0000		8.39E+02	7.82E+02	1.09E+03	1.17E+03	1.38E+03	1.48E+03	1.91E+03	4.38E-
LONG-TERM GROUNDSHINE DOSE 04 39	1.0000		6.31E+04	5.44E+04	1.09E+05	1.19E+05	1.45E+05	1.58E+05	2.09E+05	2.66E-
LONG-TERM RESUSPENSION DOSE 03 232	1.0000		7.92E+03	5.81E+03	1.65E+04	2.08E+04	2.61E+04	2.88E+04	3.34E+04	1.17E-
WATER INGESTION DOSE 05 168	1.0000		3.39E+02	3.06E+02	5.45E+02	6.44E+02	8.40E+02	9.28E+02	1.31E+03	6.66E-



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.3-190 of 1.3-265

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

POP. -DEPENDENT DECONTAMINATION COST 04 59	1.0000	1.23E+10	8.99E+09	2.64E+10	3.24E+10	4.41E+10	5.02E+10	7.50E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	1.0000	1.69E+08	1.40E+08	2.43E+08	2.77E+08	3.43E+08	3.70E+08	5.40E+08	3.42E-
POP. -DEPENDENT INTERDICTION COST 04 59	1.0000	3.34E+10	2.49E+10	7.05E+10	8.20E+10	1.10E+11	1.22E+11	1.70E+11	4.85E-
FARM-DEPENDENT INTERDICTION COST 04 331	1.0000	5.18E+08	4.48E+08	8.62E+08	9.98E+08	1.09E+09	1.14E+09	1.36E+09	2.01E-
POP. -DEPENDENT CONDEMNATION COST 04 168	0.7648	3.82E+07	4.96E+06	9.29E+07	1.42E+08	2.63E+08	6.05E+08	6.22E+09	4.52E-
FARM-DEPENDENT CONDEMNATION COST 05 184	1.0000	1.47E+07	1.10E+07	3.02E+07	3.13E+07	3.40E+07	3.53E+07	4.82E+07	1.19E-
EMERGENCY PHASE COST 05 7	1.0000	6.11E+08	4.67E+08	1.13E+09	1.28E+09	1.73E+09	1.97E+09	2.22E+09	1.57E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 05 364	1.0000	1.52E+07	1.14E+07	3.06E+07	3.14E+07	3.34E+07	3.43E+07	4.19E+07	2.85E-
CROP DISPOSAL COST 05 364	1.0000	5.01E+08	4.51E+08	7.47E+08	8.07E+08	9.64E+08	1.01E+09	1.18E+09	2.85E-
AFFECTED AREA/POPULATION 0-80.5 km									
FARM DECONTAMINATION (HECTARES) 04 59	1.0000	9.93E+04	9.28E+04	1.30E+05	1.46E+05	1.94E+05	2.10E+05	2.67E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	1.0000	1.26E+06	8.97E+05	2.65E+06	3.19E+06	4.19E+06	4.71E+06	6.01E+06	5.42E-
FARM INTERDICTION (HECTARES) 05 364	1.0000	2.15E+05	2.00E+05	3.11E+05	3.23E+05	3.55E+05	3.70E+05	5.05E+05	2.85E-
POP. INTERDICTION (INDIVIDUALS) 04 59	1.0000	1.26E+06	8.97E+05	2.65E+06	3.19E+06	4.19E+06	4.71E+06	6.01E+06	5.42E-
FARM CONDEMNATION (HECTARES) 05 184	1.0000	9.42E+02	7.71E+02	1.92E+03	2.22E+03	2.92E+03	3.04E+03	3.51E+03	1.19E-
POP. CONDEMNATION (INDIVIDUALS) 04 168	0.7648	1.31E+02	1.88E+01	3.26E+02	4.73E+02	7.46E+02	2.21E+03	1.98E+04	4.52E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-192 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 12

SOURCE TERM 2 OF 6:
RC2

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-05	1.00E-05	1.00E-05	1.00E-07
2.00E-05	1.00E+00	1.00E+00	7.26E-01
3.00E-05	1.00E+00	1.00E+00	2.00E-07
5.00E-05	1.00E+00	1.00E+00	7.26E-01
7.00E-05	1.00E+00	1.00E+00	3.00E-07
1.00E-04	1.00E+00	1.00E+00	7.26E-01
2.00E-04	1.00E+00	1.00E+00	5.00E-07
3.00E-04	1.00E+00	1.00E+00	7.26E-01
5.00E-04	1.00E+00	1.00E+00	7.00E-07
7.00E-04	1.00E+00	1.00E+00	1.00E-06
1.00E-03	1.00E+00	1.00E+00	7.26E-01
2.00E-03	1.00E+00	1.00E+00	2.00E-06
3.00E-03	1.00E+00	1.00E+00	7.26E-01
5.00E-03	1.00E+00	1.00E+00	3.00E-06
7.00E-03	1.00E+00	1.00E+00	7.26E-01
1.00E-02	1.00E+00	1.00E+00	5.00E-06
2.00E-02	1.00E+00	1.00E+00	7.26E-01
3.00E-02	1.00E+00	1.00E+00	7.00E-06
5.00E-02	1.00E+00	1.00E+00	7.26E-01
7.00E-02	1.00E+00	1.00E+00	3.00E-05
1.00E-01	9.88E-01	1.00E+00	7.26E-01
2.00E-01	9.88E-01	1.00E+00	2.00E-03



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = US-APWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 3 OF 6:
 RC3

OVERALL RESULTS OBTAINED BY COMBINING 2 EMERGENCY RESPONSE COHORTS FROM "EARLY" WITH THE WEIGHTING FRACTIONS BELOW APPLIED TO THEM:

COHORT 1 = 95% EVACUATION

COHORT 2 = NO EVACUATION

FRACTION OF THE PEOPLE

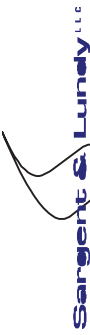
 0.950
 0.050

AND THEN MERGING THE 2 RESULTS ABOVE WITH THE SINGLE SET OF RESULTS FROM "CHRONC" DESCRIBED BELOW:

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

RESULTS WHICH ARE PRODUCED ONLY BY "EARLY" OR ONLY BY "CHRONC" ARE PRESENTED IN LATER SECTIONS.

10-JAN-10 17:35:21	PAGE 13	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PEAK	PEAK
QUANTILES												
HEALTH EFFECTS CASES												
CAN FAT/TOTAL	06 172	0-80.5 km	1.0000	2.24E+04	1.26E+04	5.62E+04	7.06E+04	9.14E+04	1.01E+05	1.49E+05	1.49E+05	9.51E-
CAN FAT/TOTAL	05 181	0-16.1 km	1.0000	4.12E+02	3.12E+02	8.78E+02	1.13E+03	1.85E+03	2.27E+03	5.48E+03	5.48E+03	5.71E-
ERL FAT/TOTAL	05 373	0-80.5 km	0.3165	6.22E-02	0.00E+00	6.56E-02	2.37E-01	1.47E+00	2.12E+00	7.37E+00	7.37E+00	6.19E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Client	PSEG Nuclear Development		Prepared by		Date	
Project	PSEG ESPA		Reviewed by		Date	
Proj. No	12380-001	Equip. No.	Approved by		Date	

ERL FAT/TOTAL 0.00E+00	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

POPULATION EXCEEDING DOSE

EARLY dose	04	167	2.00 Sv	0.9274	4.61E+03	1.21E+02	1.04E+04	2.43E+04	8.21E+04	9.01E+04	1.44E+05	2.66E-
EARLY dose	06	172	0.250 Sv	0.9964	1.48E+05	6.70E+04	3.94E+05	5.36E+05	8.32E+05	9.98E+05	1.60E+06	9.51E-

POPULATION DOSE (Sv)

L-EDEWBODY	05	181	0-16.1 km	1.0000	4.92E+03	4.15E+03	9.61E+03	1.14E+04	1.64E+04	1.92E+04	4.23E+04	5.71E-
L-EDEWBODY	04	37	0-80.5 km	1.0000	2.59E+05	1.50E+05	6.58E+05	7.74E+05	1.02E+06	1.10E+06	1.42E+06	4.85E-

POPULATION WEIGHTED RISK

ERL FAT/TOTAL	05	373	0-80.5 km	0.3165	7.64E-09	0.00E+00	7.94E-09	3.03E-08	1.89E-07	2.64E-07	9.05E-07	6.19E-
ERL FAT/TOTAL	06	172	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	05	176	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	05	176	3.2-4.8 km	0.2498	1.97E-04	0.00E+00	2.27E-04	6.20E-04	4.01E-03	8.55E-03	2.22E-02	5.71E-
CAN FAT/TOTAL	06	172	0-80.5 km	1.0000	2.56E-03	1.41E-03	6.60E-03	8.04E-03	1.06E-02	1.11E-02	1.77E-02	9.51E-
CAN FAT/TOTAL	05	181	0-16.1 km	1.0000	5.27E-03	3.07E-03	1.24E-02	1.70E-02	3.01E-02	3.52E-02	8.89E-02	5.71E-

PEAK DOSE FOUND ON SPATIAL GRID (Sv)

L-EDEWBODY	03	175	0-1.6 km	1.0000	7.88E+01	6.06E+01	1.45E+02	1.93E+02	2.99E+02	5.36E+02	5.81E+02	4.33E-
------------	----	-----	----------	--------	----------	----------	----------	----------	----------	----------	----------	--------



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related		
Client PSEG Nuclear Development		Prepared by		
Project PSEG ESPA		Reviewed by		
Proj. No 12380-001		Approved by		
Equip. No.		Date		

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = US-APWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 3 OF 6:
 RC3

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

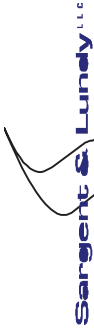
COHORT 1 = 95% EVACUATION

10-JAN-10 17:35:21	PAGE 14	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.72E+04	9.04E+03	4.53E+04	5.71E+04	7.89E+04	8.73E+04	1.35E+05	9.51E-
06 172		0.9881	2.05E+02	7.87E+01	5.56E+02	7.75E+02	1.36E+03	1.69E+03	4.68E+03	5.71E-
05 181		0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00		0								
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00		0								
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00		0								

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.6487	4.50E+03	1.19E+01	1.04E+04	2.42E+04	8.21E+04	9.01E+04	1.44E+05	2.66E-
04 167									
EARLY dose L-EDEWBODY > 0.250 Sv	0.9435	1.48E+05	6.70E+04	3.94E+05	5.36E+05	8.32E+05	9.98E+05	1.60E+06	9.51E-
06 172									

POPULATION DOSE (Sv)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-201 of 1.3-265

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

L-EDEWBODY 05 181	TOT LIF	0-16.1 km	0.9881	1.59E+03	6.19E+02	4.21E+03	6.04E+03	1.06E+04	1.27E+04	3.53E+04	5.71E-
L-EDEWBODY 06 172	TOT LIF	0-80.5 km	1.0000	1.43E+05	7.82E+04	3.67E+05	4.78E+05	6.23E+05	6.91E+05	1.07E+06	9.51E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL		0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL		0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL		0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL		3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL		0-80.5 km	1.0000	2.12E-03	1.13E-03	5.57E-03	7.12E-03	1.00E-02	1.05E-02	1.66E-02	9.51E-
CAN FAT/TOTAL		0-16.1 km	0.9881	3.37E-03	1.26E-03	9.08E-03	1.22E-02	2.20E-02	2.72E-02	7.69E-02	1.14E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 03 175		0-1.6 km	1.0000	6.39E+01	4.86E+01	1.24E+02	1.68E+02	2.99E+02	4.27E+02	4.60E+02	4.33E-



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page 1.3-203 of 1.3-265

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

L-EDEWBODY 04 217	TOT LIF	0-16.1 km	1.0000	1.35E+04	7.37E+03	3.25E+04	4.56E+04	8.92E+04	1.07E+05	2.84E+05	1.79E-
L-EDEWBODY 06 172	TOT LIF	0-80.5 km	1.0000	1.55E+05	8.85E+04	3.79E+05	4.92E+05	6.48E+05	7.09E+05	1.10E+06	9.51E-
POPULATION WEIGHTED RISK											
05 373	ERL FAT/TOTAL	0-80.5 km	0.3165	1.53E-07	0.00E+00	1.54E-07	5.92E-07	3.76E-06	5.33E-06	1.81E-05	1.43E-
0.00E+00	ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
05 176	ERL FAT/TOTAL	3.2-4.8 km	0.2498	3.95E-03	0.00E+00	4.66E-03	1.31E-02	8.31E-02	1.77E-01	4.45E-01	5.71E-
06 172	CAN FAT/TOTAL	0-80.5 km	1.0000	2.31E-03	1.27E-03	5.89E-03	7.39E-03	1.02E-02	1.08E-02	1.72E-02	9.51E-
04 217	CAN FAT/TOTAL	0-16.1 km	1.0000	2.87E-02	1.52E-02	6.93E-02	9.65E-02	2.00E-01	2.46E-01	6.11E-01	1.79E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
04 211	L-EDEWBODY	0-1.6 km	1.0000	3.61E+02	2.71E+02	6.86E+02	9.01E+02	1.82E+03	2.16E+03	2.88E+03	8.75E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.3-204 of 1.3-265		

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = US-APWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

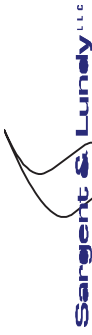
SOURCE TERM 3 OF 6:
RC3

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:35:21	PAGE 16	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PEAK	PEAK
QUANTILES												
TRIAL												
HEALTH EFFECTS CASES												
CAN FAT/TOTAL	0-80.5 km	1.0000	5.05E+03	3.07E+03	1.15E+04	1.39E+04	2.08E+04	2.26E+04	3.16E+04	4.85E-		
04 59												
CAN FAT/TOTAL	0-16.1 km	1.0000	1.29E+02	1.07E+02	2.40E+02	3.06E+02	4.11E+02	4.66E+02	9.45E+02	1.64E-		
04 217												
POPULATION DOSE (Sv)												
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	2.73E+03	2.30E+03	5.19E+03	6.43E+03	8.58E+03	9.53E+03	1.88E+04	1.64E-		
04 217												
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.15E+05	7.04E+04	2.93E+05	3.44E+05	4.82E+05	5.32E+05	7.28E+05	4.85E-		
04 59												
POPULATION WEIGHTED RISK												
CAN FAT/TOTAL	0-80.5 km	1.0000	4.35E-04	2.65E-04	1.06E-03	1.19E-03	1.57E-03	1.77E-03	2.41E-03	4.85E-		
04 59												
CAN FAT/TOTAL	0-16.1 km	1.0000	6.35E-04	5.31E-04	1.24E-03	1.55E-03	2.08E-03	2.16E-03	2.77E-03	3.81E-		
05 310												

PEAK DOSE FOUND ON SPATIAL GRID (Sv)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.3-205 of 1.3-265	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 03 277	0-1.6 km	0.9517	8.11E-02	8.47E-02	1.07E-01	1.11E-01	1.21E-01	1.25E-01	1.28E-01	2.97E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 217	0-16.1 km	1.0000	2.73E+03	2.30E+03	5.19E+03	6.43E+03	8.58E+03	9.53E+03	1.88E+04	1.64E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 310		1.0000	8.87E+02	7.42E+02	1.79E+03	2.18E+03	2.96E+03	3.09E+03	3.87E+03	3.81E-
TOTAL INGESTION PATHWAYS DOSE 04 217		1.0000	1.35E+03	9.66E+02	2.99E+03	4.00E+03	6.55E+03	7.72E+03	1.52E+04	1.64E-
LONG-TERM GROUNDSHINE DOSE 05 310		1.0000	8.59E+02	7.19E+02	1.75E+03	2.14E+03	2.84E+03	3.05E+03	3.82E+03	3.81E-
LONG-TERM RESUSPENSION DOSE 05 1		1.0000	2.70E+01	1.89E+01	6.33E+01	7.93E+01	1.03E+02	1.07E+02	1.34E+02	4.69E-
WATER INGESTION DOSE 04 217		1.0000	1.31E+03	9.11E+02	2.91E+03	3.96E+03	6.52E+03	7.61E+03	1.51E+04	1.64E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 284		0.9975	4.80E+02	2.89E+02	1.16E+03	1.59E+03	2.79E+03	3.08E+03	4.07E+03	4.76E-
FARM-DEPENDENT DECONTAMINATION DOSE 06 161		0.9999	1.65E+01	1.40E+01	3.01E+01	3.35E+01	4.32E+01	4.81E+01	6.58E+01	5.90E-
INGESTION OF GRAINS 04 333		1.0000	1.25E+00	1.09E+00	2.06E+00	2.34E+00	3.05E+00	3.18E+00	3.52E+00	9.42E-
INGESTION OF LEAF VEG 05 329		1.0000	1.03E+01	9.79E+00	1.54E+01	1.87E+01	2.22E+01	2.33E+01	3.02E+01	6.66E-
INGESTION OF ROOT CROPS 05 364		1.0000	6.51E+00	6.11E+00	1.02E+01	1.08E+01	1.21E+01	1.27E+01	1.86E+01	2.85E-
INGESTION OF FRUITS 04 329		1.0000	4.01E+00	3.53E+00	6.76E+00	7.60E+00	9.58E+00	1.03E+01	1.33E+01	2.09E-
INGESTION OF LEGUMES 05 329		1.0000	1.23E+01	1.09E+01	2.02E+01	2.22E+01	2.75E+01	3.01E+01	3.66E+01	6.66E-
INGESTION OF BEEF 04 307		1.0000	2.80E+00	2.39E+00	5.00E+00	6.13E+00	8.38E+00	9.33E+00	1.39E+01	4.38E-
INGESTION OF MILK 05 310		1.0000	4.78E+00	4.30E+00	7.82E+00	9.04E+00	1.08E+01	1.13E+01	1.58E+01	2.85E-



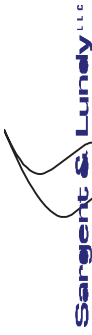
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.3-206 of 1.3-265		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 06 164	1.0000	8.10E-01	6.63E-01	1.54E+00	2.02E+00	2.53E+00	2.78E+00	4.85E+00	4.07E-
INGESTION OF OTHER MEAT CROPS 06 203	1.0000	4.93E-01	4.21E-01	8.43E-01	1.01E+00	1.16E+00	1.24E+00	2.07E+00	4.07E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 59	1.0000	1.15E+05	7.04E+04	2.93E+05	3.44E+05	4.82E+05	5.32E+05	7.28E+05	4.85E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 59	1.0000	8.06E+04	4.93E+04	2.04E+05	2.33E+05	3.11E+05	3.39E+05	4.49E+05	4.85E-
TOTAL INGESTION PATHWAYS DOSE 04 217	1.0000	3.95E+03	3.13E+03	7.14E+03	8.96E+03	1.18E+04	1.29E+04	2.04E+04	1.64E-
LONG-TERM GROUNDSHINE DOSE 04 59	1.0000	7.78E+04	4.70E+04	2.00E+05	2.26E+05	3.00E+05	3.28E+05	4.43E+05	4.85E-
LONG-TERM RESUSPENSION DOSE 06 203	1.0000	2.80E+03	1.96E+03	6.25E+03	7.47E+03	9.86E+03	1.02E+04	1.31E+04	9.49E-
WATER INGESTION DOSE 04 217	1.0000	3.23E+03	2.38E+03	6.54E+03	8.26E+03	1.14E+04	1.25E+04	1.99E+04	1.64E-



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.3-208 of 1.3-265

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

POP.-DEPENDENT DECONTAMINATION COST 04 285	1.0000	1.78E+10	8.78E+09	5.04E+10	5.80E+10	7.27E+10	7.56E+10	8.83E+10	3.14E-
FARM-DEPENDENT DECONTAMINATION COST 04 329	1.0000	2.10E+08	1.78E+08	3.36E+08	3.76E+08	4.90E+08	5.19E+08	6.42E+08	2.19E-
POP.-DEPENDENT INTERDICTION COST 04 59	1.0000	8.73E+10	4.52E+10	2.36E+11	3.16E+11	4.50E+11	5.11E+11	6.51E+11	4.85E-
FARM-DEPENDENT INTERDICTION COST 05 5	1.0000	4.72E+08	4.09E+08	7.72E+08	8.73E+08	1.04E+09	1.07E+09	1.36E+09	2.47E-
POP.-DEPENDENT CONDEMNATION COST 04 30	0.9725	2.09E+10	6.68E+09	5.98E+10	7.73E+10	1.62E+11	2.10E+11	3.06E+11	1.85E-
FARM-DEPENDENT CONDEMNATION COST 05 40	1.0000	1.38E+08	1.15E+08	2.88E+08	3.55E+08	5.32E+08	6.01E+08	7.39E+08	3.35E-
EMERGENCY PHASE COST 05 329	1.0000	5.22E+08	2.58E+08	1.10E+09	1.24E+09	1.63E+09	1.84E+09	2.22E+09	6.66E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 04 359	1.0000	1.00E+07	6.68E+06	2.33E+07	2.85E+07	3.17E+07	3.26E+07	3.79E+07	1.05E-
CROP DISPOSAL COST 05 5	1.0000	3.69E+08	3.33E+08	5.55E+08	6.23E+08	7.27E+08	7.48E+08	9.33E+08	2.47E-
AFFECTED AREA/POPULATION 0-80.5 km									
FARM DECONTAMINATION (HECTARES) 04 329	1.0000	1.04E+05	9.25E+04	1.55E+05	1.90E+05	2.29E+05	2.44E+05	3.09E+05	2.19E-
POP. DECONTAMINATION (INDIVIDUALS) 04 285	1.0000	1.44E+06	7.25E+05	3.48E+06	4.27E+06	5.25E+06	5.41E+06	6.12E+06	3.14E-
FARM INTERDICTION (HECTARES) 05 97	1.0000	1.49E+05	1.24E+05	2.30E+05	2.58E+05	3.10E+05	3.20E+05	4.01E+05	3.81E-
POP. INTERDICTION (INDIVIDUALS) 04 285	1.0000	1.44E+06	7.25E+05	3.48E+06	4.27E+06	5.25E+06	5.41E+06	6.12E+06	3.14E-
FARM CONDEMNATION (HECTARES) 05 40	1.0000	8.92E+03	7.32E+03	1.76E+04	2.19E+04	3.00E+04	3.19E+04	4.93E+04	3.79E-
POP. CONDEMNATION (INDIVIDUALS) 04 30	0.9725	7.53E+04	2.83E+04	2.08E+05	2.65E+05	4.68E+05	7.32E+05	1.18E+06	1.85E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-210 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

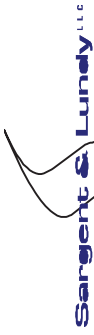
MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 18

SOURCE TERM 3 OF 6:
RC3

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	PROB>=X	X	PROB>=X
1.00E-05	1.00E+00	1.00E-04	1.00E-08
2.00E-05	1.00E+00	2.00E-04	2.00E-08
3.00E-05	1.00E+00	3.00E-04	3.00E-08
5.00E-05	1.00E+00	5.00E-04	5.00E-08
7.00E-05	1.00E+00	7.00E-04	7.00E-08
1.00E-04	1.00E+00	1.00E-03	1.00E-07
2.00E-04	1.00E+00	2.00E-03	2.00E-07
3.00E-04	1.00E+00	3.00E-03	3.00E-07
5.00E-04	1.00E+00	5.00E-03	5.00E-07
7.00E-04	1.00E+00	7.00E-03	7.00E-07
1.00E-03	1.00E+00	1.00E-02	1.00E-06
2.00E-03	1.00E+00	2.00E-02	2.00E-06
3.00E-03	1.00E+00	3.00E-02	3.00E-06
5.00E-03	1.00E+00	5.00E-02	5.00E-06
7.00E-03	1.00E+00	7.00E-02	7.00E-06
1.00E-02	1.00E+00	1.00E-01	1.00E-05
2.00E-02	1.00E+00	2.00E-01	2.00E-05
3.00E-02	1.00E+00	3.00E-01	3.00E-05
5.00E-02	1.00E+00	5.00E-01	5.00E-05
7.00E-02	1.00E+00	7.00E-01	7.00E-05
1.00E-01	1.00E+00	1.00E+00	1.00E-04
2.00E-01	1.00E+00	2.00E+00	2.00E-04

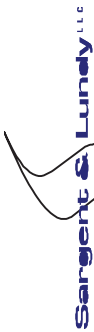


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.3-221 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 210	0-16.1 km	1.0000	1.47E+03	8.39E+02	3.42E+03	4.64E+03	1.03E+04	1.21E+04	2.40E+04	1.90E-
L-EDEWBODY TOT LIF 04 334	0-80.5 km	1.0000	1.82E+04	1.15E+04	4.24E+04	5.32E+04	7.11E+04	7.51E+04	1.05E+05	1.33E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 05 349	0-80.5 km	0.0026	2.36E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-07	4.76E-
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL 05 349	3.2-4.8 km	0.0026	1.64E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.56E-03	4.76E-
CAN FAT/TOTAL 04 334	0-80.5 km	1.0000	1.91E-04	1.16E-04	4.73E-04	5.84E-04	7.89E-04	8.63E-04	1.31E-03	1.33E-
CAN FAT/TOTAL 05 210	0-16.1 km	1.0000	2.89E-03	1.45E-03	7.02E-03	9.34E-03	2.11E-02	2.68E-02	5.11E-02	1.90E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 176	0-1.6 km	1.0000	4.13E+01	3.22E+01	7.81E+01	1.01E+02	1.96E+02	2.73E+02	3.12E+02	4.57E-



Calcs. For ENVIRONMENTAL CONSEQUENCE ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-222 of 1.3-265

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date
	Date
	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = US-APWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

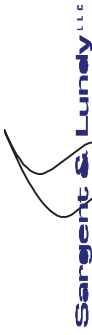
SOURCE TERM 4 OF 6:
 RC4

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:35:21	PAGE 22	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PEAK	PEAK
QUANTILES												
TRIAL												
HEALTH EFFECTS CASES												
CAN FAT/TOTAL	0-80.5 km	1.0000	2.74E+03	2.05E+03	5.66E+03	6.75E+03	8.04E+03	8.59E+03	8.59E+03	1.34E+04	1.19E-	1.19E-
04 115												
CAN FAT/TOTAL	0-16.1 km	1.0000	7.38E+01	6.29E+01	1.31E+02	1.61E+02	2.58E+02	3.02E+02	3.02E+02	3.88E+02	1.24E-	1.24E-
05 56												
POPULATION DOSE (Sv)												
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	1.66E+03	1.32E+03	3.13E+03	3.82E+03	5.93E+03	7.01E+03	7.01E+03	8.93E+03	1.24E-	1.24E-
05 56												
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	6.20E+04	4.59E+04	1.14E+05	1.28E+05	1.69E+05	1.90E+05	1.90E+05	3.05E+05	1.19E-	1.19E-
04 115												
POPULATION WEIGHTED RISK												
CAN FAT/TOTAL	0-80.5 km	1.0000	3.00E-04	2.20E-04	6.48E-04	7.46E-04	9.23E-04	1.01E-03	1.01E-03	1.36E-03	1.19E-	1.19E-
04 115												
CAN FAT/TOTAL	0-16.1 km	1.0000	7.34E-04	6.48E-04	1.29E-03	1.55E-03	2.07E-03	2.14E-03	2.14E-03	2.89E-03	1.24E-	1.24E-
05 56												

PEAK DOSE FOUND ON SPATIAL GRID (SV)



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.3-223 of 1.3-265

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

L-EDEWBODY 03 123	0-1.6 km	0.9037	9.49E-02	1.01E-01	1.09E-01	1.13E-01	1.22E-01	1.26E-01	1.29E-01	3.17E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 56	0-16.1 km	1.0000	1.66E+03	1.32E+03	3.13E+03	3.82E+03	5.93E+03	7.01E+03	8.93E+03	1.24E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 60		1.0000	1.02E+03	8.92E+02	1.92E+03	2.24E+03	3.01E+03	3.10E+03	4.03E+03	1.67E-
TOTAL INGESTION PATHWAYS DOSE 05 210		1.0000	1.81E+02	1.39E+02	3.24E+02	4.20E+02	6.64E+02	7.34E+02	1.20E+03	3.81E-
LONG-TERM GROUNDSHINE DOSE 05 56		1.0000	9.77E+02	8.48E+02	1.85E+03	2.20E+03	2.96E+03	3.08E+03	3.95E+03	1.24E-
LONG-TERM RESUSPENSION DOSE 05 160		1.0000	4.10E+01	2.76E+01	1.00E+02	1.17E+02	1.66E+02	1.94E+02	2.59E+02	1.33E-
WATER INGESTION DOSE 05 210		1.0000	1.41E+02	1.07E+02	2.80E+02	3.69E+02	6.20E+02	7.16E+02	1.14E+03	3.81E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 126		1.0000	4.47E+02	2.59E+02	1.07E+03	1.42E+03	3.04E+03	3.18E+03	4.74E+03	1.40E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 148		1.0000	1.26E+01	1.08E+01	2.31E+01	2.74E+01	3.30E+01	3.49E+01	4.87E+01	6.66E-
INGESTION OF GRAINS 05 60		1.0000	1.14E+00	1.04E+00	1.74E+00	2.03E+00	2.26E+00	2.37E+00	3.12E+00	1.52E-
INGESTION OF LEAF VEG 06 204		1.0000	8.99E+00	8.25E+00	1.27E+01	1.44E+01	1.94E+01	2.04E+01	2.67E+01	5.90E-
INGESTION OF ROOT CROPS 06 204		1.0000	5.64E+00	5.30E+00	9.01E+00	1.01E+01	1.10E+01	1.14E+01	1.62E+01	5.90E-
INGESTION OF FRUITS 06 204		1.0000	4.44E+00	3.98E+00	6.76E+00	7.43E+00	8.88E+00	9.58E+00	1.21E+01	5.90E-
INGESTION OF LEGUMES 06 204		1.0000	1.08E+01	1.02E+01	1.59E+01	1.92E+01	2.15E+01	2.22E+01	3.24E+01	5.90E-
INGESTION OF BEEF 04 291		1.0000	3.07E+00	2.53E+00	5.44E+00	6.51E+00	9.45E+00	1.04E+01	1.41E+01	1.71E-
INGESTION OF MILK 05 282		1.0000	4.51E+00	3.79E+00	7.49E+00	8.86E+00	1.12E+01	1.20E+01	1.85E+01	7.61E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-224 of 1.3-265

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	Non-Safety Related			
INGESTION OF POULTRY	1.0000	9.32E-01	7.67E-01	1.58E+00	3.02E+00
04 175				2.02E+00	3.29E+00
INGESTION OF OTHER MEAT CROPS	1.0000	4.10E-01	3.24E-01	7.55E-01	1.12E+00
06 205				9.75E-01	1.18E+00
L-EDEMBODY POP. DOSE (Sv)		0-80.5 km			
TOTAL LONG-TERM PATHWAYS DOSE	1.0000	6.20E+04	4.59E+04	1.14E+05	1.69E+05
04 115				1.28E+05	3.05E+05
LONG-TERM DIRECT EXPOSURE PATHWAYS	1.0000	5.52E+04	3.99E+04	1.07E+05	1.45E+05
04 115				1.17E+05	1.59E+05
TOTAL INGESTION PATHWAYS DOSE	1.0000	8.16E+02	7.60E+02	1.11E+03	1.50E+03
05 24				1.22E+03	2.53E+03
LONG-TERM GROUNDSHINE DOSE	1.0000	5.17E+04	3.76E+04	1.04E+05	1.33E+05
04 115				1.12E+05	1.43E+05
LONG-TERM RESUSPENSION DOSE	1.0000	3.50E+03	2.29E+03	8.02E+03	1.35E+04
03 287				1.02E+04	1.52E+04
WATER INGESTION DOSE	1.0000	3.35E+02	2.73E+02	6.06E+02	1.03E+03
06 34				7.53E+02	1.09E+03
				1.81E+03	7.64E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-227 of 1.3-265

Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
		Prepared by	Date
		Reviewed by	Date
		Approved by	Date

MILK DISPOSAL AREA (HECTARES)	1.0000	1.59E+05	1.30E+05	2.82E+05	3.13E+05	3.62E+05	3.85E+05	4.99E+05	2.81E-
04									
CROP DISPOSAL AREA (HECTARES)	1.0000	1.60E+05	1.33E+05	2.63E+05	3.03E+05	3.30E+05	3.43E+05	4.56E+05	2.47E-
05									



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-228 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

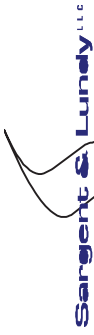
MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 24

SOURCE TERM 4 OF 6:
RC4

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-06	0.00E+00	1.00E-05	1.00E-07
2.00E-06	0.00E+00	2.00E-05	2.00E-07
3.00E-06	0.00E+00	3.00E-05	3.00E-07
5.00E-06	0.00E+00	5.00E-05	5.00E-07
7.00E-06	0.00E+00	7.00E-05	7.00E-07
1.00E-05	0.00E+00	1.00E-04	1.00E-06
2.00E-05	0.00E+00	2.00E-04	2.00E-06
3.00E-05	0.00E+00	3.00E-04	3.00E-06
5.00E-05	0.00E+00	5.00E-04	5.00E-06
7.00E-05	0.00E+00	7.00E-04	7.00E-06
1.00E-04	0.00E+00	1.00E-03	1.00E-05
2.00E-04	0.00E+00	2.00E-03	2.00E-05
3.00E-04	0.00E+00	3.00E-03	3.00E-05
5.00E-04	0.00E+00	5.00E-03	5.00E-05
7.00E-04	0.00E+00	7.00E-03	7.00E-05
1.00E-03	0.00E+00	1.00E-02	1.00E-04
2.00E-03	0.00E+00	2.00E-02	2.00E-04
3.00E-03	0.00E+00	3.00E-02	3.00E-04
5.00E-03	0.00E+00	5.00E-02	5.00E-04
7.00E-03	0.00E+00	7.00E-02	7.00E-04
1.00E-02	0.00E+00	1.00E-01	1.00E-03
2.00E-02	0.00E+00	2.00E-01	2.00E-03



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.3-239 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 04 380	0-16.1 km	1.0000	1.21E+02	8.20E+01	2.73E+02	3.70E+02	6.37E+02	7.64E+02	1.24E+03	1.33E-
L-EDEWBODY TOT LIF 06 320	0-80.5 km	1.0000	4.62E+03	3.65E+03	9.35E+03	1.07E+04	1.31E+04	1.43E+04	2.13E+04	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 06 320	0-80.5 km	1.0000	1.99E-05	1.55E-05	3.98E-05	5.04E-05	6.12E-05	6.66E-05	9.79E-05	9.51E-
CAN FAT/TOTAL 04 294	0-16.1 km	1.0000	6.99E-05	4.75E-05	1.56E-04	2.16E-04	3.56E-04	4.23E-04	7.34E-04	1.36E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 176	0-1.6 km	1.0000	2.36E+00	1.72E+00	4.35E+00	5.54E+00	7.54E+00	8.04E+00	1.04E+01	4.57E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-240 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = US-APWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

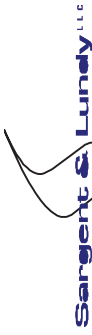
SOURCE TERM 5 OF 6:
RC5

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 17:35:21	PAGE 28	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	QUANTILES	99.5TH	CONC	PEAK	PEAK
TRIAL													
HEALTH EFFECTS CASES													
CAN FAT/TOTAL	0-80.5 km	1.0000	2.69E+03	2.22E+03	5.26E+03	6.13E+03	7.32E+03	7.55E+03	1.18E+04	1.18E+04	9.51E-		
06 320													
CAN FAT/TOTAL	0-16.1 km	1.0000	5.79E+01	5.18E+01	1.02E+02	1.09E+02	1.27E+02	1.35E+02	1.91E+02	1.91E+02	1.19E-		
04 156													
POPULATION DOSE (Sv)													
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	1.31E+03	1.12E+03	2.27E+03	3.18E+03	3.34E+03	4.32E+03	1.19E-				
04 156													
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	6.09E+04	5.12E+04	1.09E+05	1.22E+05	1.59E+05	1.78E+05	2.67E+05	2.67E+05	9.51E-		
06 320													
POPULATION WEIGHTED RISK													
CAN FAT/TOTAL	0-80.5 km	1.0000	3.22E-04	2.68E-04	6.29E-04	7.36E-04	9.21E-04	1.01E-03	1.42E-03	1.42E-03	9.51E-		
06 320													
CAN FAT/TOTAL	0-16.1 km	1.0000	7.74E-04	7.01E-04	1.21E-03	1.36E-03	1.80E-03	2.01E-03	2.44E-03	2.44E-03	1.19E-		
04 156													

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-244 of 1.3-265

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related		Prepared by		Date	
Project	PSEG ESPA					Reviewed by		Date	
Proj. No	12380-001	Equip. No.				Approved by		Date	

POP.-DEPENDENT DECONTAMINATION COST 04 336	1.0000	4.72E+09	3.33E+09	1.03E+10	1.20E+10	1.72E+10	2.00E+10	3.10E+10	5.42E-
FARM-DEPENDENT DECONTAMINATION COST 04 336	1.0000	7.67E+07	7.22E+07	1.10E+08	1.22E+08	1.53E+08	1.69E+08	2.65E+08	3.33E-
POP.-DEPENDENT INTERDICTION COST 04 336	1.0000	1.41E+10	1.01E+10	3.08E+10	3.85E+10	5.81E+10	6.62E+10	9.61E+10	5.42E-
FARM-DEPENDENT INTERDICTION COST 04 3	1.0000	4.17E+08	3.40E+08	7.36E+08	7.97E+08	9.57E+08	1.01E+09	1.16E+09	1.04E-
POP.-DEPENDENT CONDEMNATION COST 04 143	0.2632	3.51E+06	0.00E+00	4.21E+06	2.09E+07	7.47E+07	9.07E+07	2.08E+08	9.01E-
FARM-DEPENDENT CONDEMNATION COST 05 216	1.0000	1.36E+06	9.76E+05	3.09E+06	3.60E+06	5.10E+06	5.63E+06	9.86E+06	5.36E-
EMERGENCY PHASE COST 05 34	1.0000	1.28E+08	9.46E+07	2.72E+08	3.47E+08	5.53E+08	6.59E+08	1.21E+09	1.13E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 06 52	1.0000	1.24E+07	8.78E+06	3.01E+07	3.07E+07	3.22E+07	3.29E+07	4.03E+07	5.90E-
CROP DISPOSAL COST 06 152	1.0000	4.11E+08	3.61E+08	6.94E+08	7.37E+08	8.36E+08	8.82E+08	1.08E+09	9.51E-
AFFECTED AREA/POPULATION 0-80.5 km									
FARM DECONTAMINATION (HECTARES) 04 336	1.0000	5.16E+04	4.69E+04	7.92E+04	9.19E+04	1.15E+05	1.24E+05	1.70E+05	3.33E-
POP. DECONTAMINATION (INDIVIDUALS) 04 336	1.0000	6.02E+05	4.06E+05	1.28E+06	1.72E+06	2.55E+06	2.91E+06	4.22E+06	5.42E-
FARM INTERDICTION (HECTARES) 06 152	1.0000	1.78E+05	1.49E+05	3.01E+05	3.10E+05	3.31E+05	3.41E+05	4.41E+05	9.51E-
POP. INTERDICTION (INDIVIDUALS) 04 336	1.0000	6.02E+05	4.06E+05	1.28E+06	1.72E+06	2.55E+06	2.91E+06	4.22E+06	5.42E-
FARM CONDEMNATION (HECTARES) 05 216	1.0000	9.81E+01	7.10E+01	2.21E+02	2.74E+02	3.63E+02	4.02E+02	7.21E+02	5.36E-
POP. CONDEMNATION (INDIVIDUALS) 04 143	0.2632	1.20E+01	0.00E+00	1.61E+01	7.49E+01	2.19E+02	2.87E+02	6.63E+02	9.01E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

MILK DISPOSAL AREA (HECTARES)	1.0000	1.80E+05	1.49E+05	3.05E+05	3.17E+05	3.47E+05	3.60E+05	4.58E+05	6.66E-	
05 328										
CROP DISPOSAL AREA (HECTARES)	1.0000	1.78E+05	1.49E+05	3.01E+05	3.10E+05	3.31E+05	3.41E+05	4.41E+05	9.51E-	
06 152										

Rev.	2	Date	
Page	1.3-245 of 1.3-265		

Prepared by		Date	
Reviewed by		Date	
Approved by		Date	



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-246 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

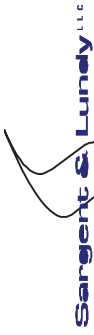
MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 30

SOURCE TERM 5 OF 6:
RC5

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-07	1.00E+00	0.00E+00	1.00E-07
2.00E-07	1.00E+00	0.00E+00	2.00E-07
3.00E-07	1.00E+00	0.00E+00	3.00E-07
5.00E-07	1.00E+00	0.00E+00	5.00E-07
7.00E-07	1.00E+00	0.00E+00	7.00E-07
1.00E-06	1.00E+00	0.00E+00	1.00E-06
2.00E-06	1.00E+00	0.00E+00	2.00E-06
3.00E-06	1.00E+00	0.00E+00	3.00E-06
5.00E-06	1.00E+00	0.00E+00	5.00E-06
7.00E-06	1.00E+00	0.00E+00	7.00E-06
1.00E-05	1.00E+00	0.00E+00	1.00E-05
2.00E-05	1.00E+00	0.00E+00	2.00E-05
3.00E-05	1.00E+00	0.00E+00	3.00E-05
5.00E-05	1.00E+00	0.00E+00	5.00E-05
7.00E-05	1.00E+00	0.00E+00	7.00E-05
1.00E-04	1.00E+00	0.00E+00	1.00E-04
2.00E-04	1.00E+00	0.00E+00	2.00E-04
3.00E-04	1.00E+00	0.00E+00	3.00E-04
5.00E-04	1.00E+00	0.00E+00	5.00E-04
7.00E-04	1.00E+00	0.00E+00	7.00E-04
1.00E-03	1.00E+00	0.00E+00	1.00E-03
2.00E-03	1.00E+00	0.00E+00	2.00E-03
3.00E-03	1.00E+00	0.00E+00	3.00E-03
5.00E-03	1.00E+00	0.00E+00	5.00E-03
7.00E-03	1.00E+00	0.00E+00	7.00E-03
1.00E-02	1.00E+00	0.00E+00	1.00E-02
2.00E-02	1.00E+00	0.00E+00	2.00E-02
3.00E-02	1.00E+00	0.00E+00	3.00E-02
5.00E-02	1.00E+00	0.00E+00	5.00E-02
7.00E-02	1.00E+00	0.00E+00	7.00E-02
1.00E-01	1.00E+00	0.00E+00	1.00E-01
2.00E-01	1.00E+00	0.00E+00	2.00E-01
3.00E-01	1.00E+00	0.00E+00	3.00E-01
5.00E-01	1.00E+00	0.00E+00	5.00E-01
7.00E-01	1.00E+00	0.00E+00	7.00E-01



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-257 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 04 175	0-16.1 km	1.0000	1.01E-01	5.79E-02	2.32E-01	3.08E-01	6.73E-01	7.91E-01	1.50E+00	4.38E-
L-EDEWBODY TOT LIF 05 350	0-80.5 km	1.0000	1.10E+00	6.78E-01	2.61E+00	3.18E+00	4.21E+00	4.75E+00	7.31E+00	1.41E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 05 350	0-80.5 km	1.0000	7.10E-09	4.24E-09	1.63E-08	2.09E-08	2.73E-08	3.02E-08	4.33E-08	1.41E-
CAN FAT/TOTAL 04 175	0-16.1 km	1.0000	8.74E-08	5.03E-08	2.06E-07	2.71E-07	6.08E-07	7.39E-07	1.34E-06	4.38E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 176	0-1.6 km	1.0000	2.60E-03	2.05E-03	5.21E-03	6.30E-03	8.42E-03	9.34E-03	1.11E-02	4.57E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.3-258 of 1.3-265		

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = US-APWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

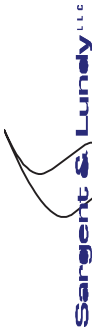
SOURCE TERM 6 OF 6:
 RC6

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

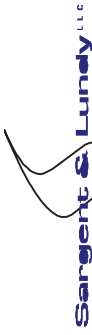
10-JAN-10 17:35:21	PAGE 34	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	PEAK	PEAK
QUANTILES										
TRIAL										
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	7.08E-01	4.64E-01	1.60E+00	2.09E+00	2.87E+00	3.37E+00	8.10E+00	1.41E-
05 350										
CAN FAT/TOTAL	0-16.1 km	1.0000	9.46E-02	6.60E-02	2.14E-01	2.78E-01	4.80E-01	5.78E-01	1.02E+00	1.40E-
05 369										
POPULATION DOSE (Sv)										
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	2.11E+00	1.37E+00	4.89E+00	6.36E+00	1.07E+01	1.24E+01	2.31E+01	1.40E-
05 369										
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.59E+01	1.05E+01	3.62E+01	4.61E+01	6.50E+01	7.46E+01	1.83E+02	1.41E-
05 350										
POPULATION WEIGHTED RISK										
CAN FAT/TOTAL	0-80.5 km	1.0000	7.42E-08	4.01E-08	1.90E-07	2.32E-07	3.36E-07	3.86E-07	9.65E-07	1.41E-
05 350										
CAN FAT/TOTAL	0-16.1 km	1.0000	8.94E-07	4.36E-07	2.21E-06	3.07E-06	6.90E-06	8.49E-06	1.50E-05	1.40E-
05 369										

PEAK DOSE FOUND ON SPATIAL GRID (SV)



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related	Rev. 2	Date
		Page 1.3-259 of 1.3-265		
Client PSEG Nuclear Development				
Project PSEG ESPA				
Proj. No 12380-001 Equip. No.				

L-EDEWBODY 04 234	0-1.6 km	1.0000	2.23E-02	1.91E-02	3.75E-02	4.57E-02	5.23E-02	5.36E-02	5.85E-02	4.00E-
L-EDEWBODY POP. DOSE (Sv)	0-16.1 km	1.0000	2.11E+00	1.37E+00	4.89E+00	6.36E+00	1.07E+01	1.24E+01	2.31E+01	1.40E-
TOTAL LONG-TERM PATHWAYS DOSE		1.0000	1.23E+00	6.09E-01	3.00E+00	4.22E+00	9.61E+00	1.07E+01	2.05E+01	1.40E-
LONG-TERM DIRECT EXPOSURE PATHWAYS		1.0000	8.88E-01	4.17E-01	2.33E+00	3.01E+00	3.84E+00	4.27E+00	6.65E+00	1.13E-
TOTAL INGESTION PATHWAYS DOSE		1.0000	1.18E+00	5.85E-01	2.88E+00	4.05E+00	9.11E+00	1.05E+01	1.98E+01	1.40E-
LONG-TERM GROUNDSHINE DOSE		1.0000	4.61E-02	2.30E-02	1.13E-01	1.57E-01	3.40E-01	4.21E-01	7.61E-01	1.40E-
LONG-TERM RESUSPENSION DOSE		1.0000	4.81E-03	3.31E-03	1.08E-02	1.49E-02	2.50E-02	2.93E-02	5.06E-02	1.28E-
WATER INGESTION DOSE		0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
POP.-DEPENDENT DECONTAMINATION DOSE		0.0484	5.82E-06	0.00E+00	0.00E+00	0.00E+00	3.05E-04	3.69E-04	7.20E-04	8.56E-
FARM-DEPENDENT DECONTAMINATION DOSE		1.0000	3.33E-02	4.68E-03	9.63E-02	1.13E-01	1.54E-01	1.76E-01	2.88E-01	1.13E-
INGESTION OF GRAINS		1.0000	5.66E-02	8.84E-03	1.51E-01	2.20E-01	4.09E-01	5.11E-01	9.53E-01	1.28E-
INGESTION OF LEAF VEG		1.0000	4.47E-02	6.41E-03	1.17E-01	1.45E-01	2.16E-01	2.36E-01	3.79E-01	1.13E-
INGESTION OF ROOT CROPS		1.0000	6.53E-02	9.38E-03	1.87E-01	2.31E-01	3.14E-01	3.33E-01	5.55E-01	1.13E-
INGESTION OF FRUITS		1.0000	3.92E-02	8.65E-03	1.06E-01	1.27E-01	1.94E-01	2.08E-01	3.26E-01	1.13E-
INGESTION OF LEGUMES		1.0000	2.76E-01	1.64E-01	7.01E-01	8.32E-01	1.09E+00	1.17E+00	2.07E+00	1.13E-
INGESTION OF BEEF		1.0000	2.71E-01	1.38E-01	7.08E-01	8.73E-01	1.11E+00	1.18E+00	2.05E+00	1.13E-
INGESTION OF MILK		05 86								



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page 1.3-262 of 1.3-265		

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related	Prepared by	Date
POP.-DEPENDENT DECONTAMINATION COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
FARM-DEPENDENT DECONTAMINATION COST	0.0484		3.84E+02	0.00E+00	2.46E+04
03 28					NOT-FOUND
2.54E+04					9.45E-
POP.-DEPENDENT INTERDICTION COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
FARM-DEPENDENT INTERDICTION COST	0.7382		8.87E+04	2.18E+03	3.92E+05
06 27					8.55E+05
1.01E+06					1.26E+06
4.94E-					
POP.-DEPENDENT CONDEMNATION COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
FARM-DEPENDENT CONDEMNATION COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
EMERGENCY PHASE COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
INTERMEDIATE PHASE COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
MILK DISPOSAL COST	0.5961		1.03E+03	8.40E+00	3.83E+03
06 349					1.08E+04
2.39E+04					
CROP DISPOSAL COST	0.7382		7.22E+04	1.71E+03	2.43E+05
03 26					3.72E+05
6.30E+05					8.09E+05
1.04E+06					1.12E-
AFFECTED AREA/POPULATION			0-80.5 km		
FARM DECONTAMINATION (HECTARES)	0.0484		3.46E-01	0.00E+00	0.00E+00
03 28					2.25E+01
NOT-FOUND					2.29E+01
9.45E-					
POP. DECONTAMINATION (INDIVIDUALS)	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
FARM INTERDICTION (HECTARES)	0.7382		4.66E+01	1.16E+00	1.67E+02
03 26					2.38E+02
4.26E+02					5.16E+02
6.15E+02					1.12E-
POP. INTERDICTION (INDIVIDUALS)	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
FARM CONDEMNATION (HECTARES)	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
POP. CONDEMNATION (INDIVIDUALS)	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.3-264 of 1.3-265

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

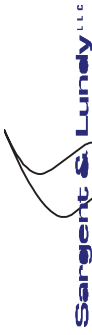
MACCS2 10-JAN-10 17:35:21 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 36

SOURCE TERM 6 OF 6:
RC6

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	1.00E-10	1.00E-09	1.00E-08
2.00E-08	1.00E+00	1.00E+00	2.00E-08
3.00E-08	1.00E+00	1.00E+00	3.00E-08
5.00E-08	1.00E+00	1.00E+00	5.00E-08
7.00E-08	1.00E+00	1.00E+00	7.00E-08
1.00E-07	1.00E+00	1.00E+00	1.00E-07
2.00E-07	1.00E+00	1.00E+00	2.00E-07
3.00E-07	1.00E+00	1.00E+00	3.00E-07
5.00E-07	1.00E+00	1.00E+00	5.00E-07
7.00E-07	1.00E+00	1.00E+00	7.00E-07
1.00E-06	1.00E+00	1.00E+00	1.00E-06
2.00E-06	1.00E+00	1.00E+00	2.00E-06
3.00E-06	1.00E+00	1.00E+00	3.00E-06
5.00E-06	1.00E+00	1.00E+00	5.00E-06
7.00E-06	1.00E+00	1.00E+00	7.00E-06
1.00E-05	1.00E+00	1.00E+00	1.00E-05
2.00E-05	1.00E+00	1.00E+00	2.00E-05
3.00E-05	1.00E+00	1.00E+00	3.00E-05
5.00E-05	1.00E+00	1.00E+00	5.00E-05
7.00E-05	1.00E+00	1.00E+00	7.00E-05
1.00E-04	1.00E+00	1.00E+00	1.00E-04
2.00E-04	1.00E+00	1.00E+00	2.00E-04
9.92E-01	1.00E+00	1.00E+00	9.92E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.3-265 of 1.3-265

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	Safety Related	X Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

3.00E-04	9.85E-01	3.00E-06	1.00E+00	3.00E-05	1.00E+00	3.00E-04	9.85E-01
5.00E-04	9.84E-01	5.00E-06	9.89E-01	5.00E-05	1.00E+00	5.00E-04	9.84E-01
7.00E-04	9.84E-01	7.00E-06	9.84E-01	7.00E-05	1.00E+00	7.00E-04	9.84E-01
1.00E-03	9.84E-01	1.00E-05	9.84E-01	1.00E-04	9.96E-01	1.00E-03	9.84E-01
2.00E-03	9.63E-01	2.00E-05	9.66E-01	2.00E-04	9.74E-01	2.00E-03	9.63E-01
3.00E-03	9.58E-01	3.00E-05	9.62E-01	3.00E-04	9.57E-01	3.00E-03	9.58E-01
5.00E-03	9.51E-01	5.00E-05	9.57E-01	5.00E-04	9.50E-01	5.00E-03	9.47E-01
7.00E-03	9.37E-01	7.00E-05	9.54E-01	7.00E-04	9.39E-01	7.00E-03	9.34E-01
1.00E-02	8.70E-01	1.00E-04	9.42E-01	1.00E-03	8.46E-01	1.00E-02	8.70E-01
2.00E-02	4.93E-01	2.00E-04	8.32E-01	2.00E-03	5.20E-01	2.00E-02	4.81E-01
3.00E-02	2.31E-01	3.00E-04	6.38E-01	3.00E-03	2.82E-01	3.00E-02	2.19E-01
5.00E-02	4.19E-02	5.00E-04	3.60E-01	5.00E-03	1.16E-01	5.00E-02	3.64E-02
5.98E-02	4.00E-04	7.00E-04	1.87E-01	7.00E-03	3.42E-02	5.85E-02	4.00E-04
N.D.	N.D.	1.00E-03	8.05E-02	1.00E-02	3.17E-03	N.D.	N.D.
N.D.	N.D.	2.00E-03	7.29E-03	1.11E-02	4.57E-04	N.D.	N.D.
N.D.	N.D.	3.00E-03	2.71E-03	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	3.10E-03	2.25E-03	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Successful completion of MACCS2 was achieved!
 This job required a total of 73.562 CPU seconds

Input processing required 0.043 CPU seconds
 Simulation required 72.578 CPU seconds
 Output processing required 0.941 CPU seconds



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	1.4-1	of 1.4-801

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT I.4
MACCS2 Output File Data (U.S. EPR)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 P1: ATMOS USER INPUT (UNIT 24) = H.INP
 P2: EARLY USER INPUT (UNIT 25) = E.2.INP
 P3: CHRONC USER INPUT (UNIT 26) = E.3.INP
 P4: METEOROLOGY DATA (UNIT 28) = C.INP
 P5: SITE DATA INPUT (UNIT 29) = D.INP
 P6: LIST OUTPUT (UNIT 06) = I.4.OUT

USER INPUT IS READ FROM UNIT 24
 RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.
 THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
 THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

RECORD
 NUMBER

RECORD

```

*****
* FILE NAME: H.INP
*
* Sargent & Lundy (10/2009)
*
*****
* Run Identification (RI) Data
*****
*
* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT
*
1 RIATNAM1001 'U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS'
*
* GEOMETRY (GE) DATA
*****
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-3 of 1.4-801

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.
Prepared by		Date
Reviewed by		Date
Approved by		Date

```

* NUMBER OF RADIAL SPATIAL ELEMENTS
*
2 GENUMRAD001 10
*
* SPATIAL ENDPOINT DISTANCES IN MILES (MATCHES SITE FILE)
*
*      END001 1 2 3 4 5
*      END002 10 20 30 40 50
*
* SPATIAL ENDPOINT DISTANCES IN KILOMETERS
*
3 GESPAEND001 1.61 3.22 4.83 6.44 8.05
4 GESPAEND002 16.1 32.2 48.3 64.4 80.5
*
*****
* NUCLIDE DATA BLOCK
*****
*
* NUMBER OF PSEUDO-STABLE NUCLIDES DEFINED IN THE MODEL
* (USED TO TRUNCATE THE DECAY CHAINS) - USER'S GUIDE APPENDIX C
*
5 ISNUMSTB001 27
*
* LIST OF PSEUDO-STABLE NUCLIDES
*
6 ISNAMSTB001 I-129 (daughter of Te-129 and Te-129m)
7 ISNAMSTB002 Xe-131m (daughter of I-131)
8 ISNAMSTB003 Xe-133m (daughter of I-133)
9 ISNAMSTB004 Xe-135m (daughter of I-135)
10 ISNAMSTB005 Cs-135 (daughter of Xe-135 and Xe-135m)
11 ISNAMSTB006 Sm-147 (daughter of Pm-147)
12 ISNAMSTB007 U-234 (daughter of Pu-238)
13 ISNAMSTB008 U-235 (daughter of Pu-239)
14 ISNAMSTB009 U-236 (daughter of Pu-240)
15 ISNAMSTB010 U-237 (daughter of Pu-241)

```



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-4 of 1.4-801

Client PSEG Nuclear Development	Safety Related X	Non-Safety Related
Project PSEG ESPA	Prepared by	
Proj. No 12380-001	Reviewed by	
Equip. No.	Approved by	
	Date	Date
	Date	Date

16	ISNAMSTB011	Np-237	(daughter of Am-241)
17	ISNAMSTB012	Rb-87	(daughter of Kr-87)
18	ISNAMSTB013	Ba-137m	(daughter of Cs-137)
19	ISNAMSTB014	Rb-88	(daughter of Kr-88)
20	ISNAMSTB015	Y-91m	(daughter of Sr-91)
21	ISNAMSTB016	Zr-93	(daughter of Y-93)
22	ISNAMSTB017	Nb-93m	(daughter of Zr-93)
23	ISNAMSTB018	Nb-95m	(daughter of Zr-95)
24	ISNAMSTB019	Nb-97	(daughter of Zr-97 and Nb-97m)
25	ISNAMSTB020	Nb-97m	(daughter of Zr-97)
26	ISNAMSTB021	Tc-99	(daughter of Mo-99)
27	ISNAMSTB022	Rh-103m	(daughter of Ru-103)
28	ISNAMSTB023	Rh-106	(daughter of Ru-106)
29	ISNAMSTB024	Te-131	(daughter of Te-131m)
30	ISNAMSTB025	Pr-144	(daughter of Ce-144 and Pr-144m)
31	ISNAMSTB026	Pr-144m	(daughter of Ce-144)
32	ISNAMSTB027	Pm-147	(daughter of Nd-147)

* NUMBER OF RADIOACTIVE NUCLIDES DEFINED IN THE MODEL
 * NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

33 ISNUMISO001 60
 *
 * NUMBER OF CHEMICAL ELEMENT GROUPS DEFINED IN THE MODEL
 * NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

- 34 ISMAXGRP001 9
 *
 * GROUP 1 - NOBLE GASES
 * GROUP 2 - IODINE
 * GROUP 3 - CESIUM, RUBIDIUM
 * GROUP 4 - TELLURIUM GROUP
 * GROUP 5 - STRONTIUM
 * GROUP 6 - MOLYBDENUM, COBALT, RUTHENIUM, TECHNETIUM
 * GROUP 7 - LANTHANUM, YTTRIUM, NEODYMIUM, PROMETHIUM, AMERICIUM, CURIUM



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-5 of 1.4-801

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

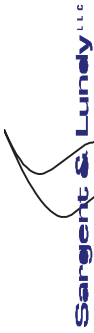
Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

* GROUP 8 - CERIUM, ACTINIDES (PLUTONIUM, NEPTUNIUM)
 * GROUP 9 - BARIUM
 *
 * WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP
 * ALL NUCLIDE GROUPS EXCEPT NOBLE GAS ARE ASSUMED SUBJECT
 * TO BOTH WET AND DRY DEPOSITION.
 * USER'S GUIDE APPENDIX C

	WETDEP	DRYDEP
35	ISDEPFLA001	.FALSE.
36	ISDEPFLA002	.TRUE.
37	ISDEPFLA003	.TRUE.
38	ISDEPFLA004	.TRUE.
39	ISDEPFLA005	.TRUE.
40	ISDEPFLA006	.TRUE.
41	ISDEPFLA007	.TRUE.
42	ISDEPFLA008	.TRUE.
43	ISDEPFLA009	.TRUE.

* CHEMICAL ELEMENT GROUP ASSIGNMENT
 * USER'S GUIDE APPENDIX C

	NUCNAM	IGROUP
44	ISOTPGRP001	Co-58
45	ISOTPGRP002	Co-60
46	ISOTPGRP003	Kr-85
47	ISOTPGRP004	Kr-85m
48	ISOTPGRP005	Kr-87
49	ISOTPGRP006	Kr-88
50	ISOTPGRP007	Rb-86
51	ISOTPGRP008	Sr-89
52	ISOTPGRP009	Sr-90
53	ISOTPGRP010	Sr-91



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-6 of 1.4-801

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

54	ISOTTPGRP011	Sr-92	5
55	ISOTTPGRP012	Y-90	7
56	ISOTTPGRP013	Y-91	7
57	ISOTTPGRP014	Y-92	7
58	ISOTTPGRP015	Y-93	7
59	ISOTTPGRP016	Zr-95	7
60	ISOTTPGRP017	Zr-97	7
61	ISOTTPGRP018	Nb-95	7
62	ISOTTPGRP019	Mo-99	6
63	ISOTTPGRP020	Tc-99m	6
64	ISOTTPGRP021	Ru-103	6
65	ISOTTPGRP022	Ru-105	6
66	ISOTTPGRP023	Ru-106	6
67	ISOTTPGRP024	Rh-105	6
68	ISOTTPGRP025	Sb-127	4
69	ISOTTPGRP026	Sb-129	4
70	ISOTTPGRP027	Te-127	4
71	ISOTTPGRP028	Te-127m	4
72	ISOTTPGRP029	Te-129	4
73	ISOTTPGRP030	Te-129m	4
74	ISOTTPGRP031	Te-131m	4
75	ISOTTPGRP032	Te-132	4
76	ISOTTPGRP033	I-131	2
77	ISOTTPGRP034	I-132	2
78	ISOTTPGRP035	I-133	2
79	ISOTTPGRP036	I-134	2
80	ISOTTPGRP037	I-135	2
81	ISOTTPGRP038	Xe-133	1
82	ISOTTPGRP039	Xe-135	1
83	ISOTTPGRP040	Cs-134	3
84	ISOTTPGRP041	Cs-136	3
85	ISOTTPGRP042	Cs-137	3
86	ISOTTPGRP043	Ba-139	9
87	ISOTTPGRP044	Ba-140	9
88	ISOTTPGRP045	La-140	7



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

89	ISOTPGRP046	Ia-141	7		
90	ISOTPGRP047	Ia-142	7		
91	ISOTPGRP048	Ce-141	8		
92	ISOTPGRP049	Ce-143	8		
93	ISOTPGRP050	Ce-144	8		
94	ISOTPGRP051	Pr-143	7		
95	ISOTPGRP052	Nd-147	7		
96	ISOTPGRP053	Np-239	8		
97	ISOTPGRP054	Pu-238	8		
98	ISOTPGRP055	Pu-239	8		
99	ISOTPGRP056	Pu-240	8		
100	ISOTPGRP057	Pu-241	8		
101	ISOTPGRP058	Am-241	7		
102	ISOTPGRP059	Cm-242	7		
103	ISOTPGRP060	Cm-244	7		

* WET DEPOSITION (WD) DATA					

* WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR					

104	WDCWASH1001	9.5E-5	*NUREG/CR-4551 PART 7, TABLE 2.9		

* WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR					

105	WDCWASH2001	0.8	*NUREG/CR-4551 PART 7, TABLE 2.9		

* DRY DEPOSITION (DD) DATA					

* NUMBER OF PARTICLE SIZE GROUPS					

106	DDNPSGRP001	1	*NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C		



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.4-8 of 1.4-801	
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* * DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
 *
 107 DDVDEPOS001 0.01 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
 *

 * DISPERSION PARAMETER (DP) DATA

 *
 * # OF DISTANCES IN PLUME-SIZE TABLES--WHICH CAN BE USED AS AN ALTERNATIVE TO
 * THE POWER-LAW MODEL: (TO UTILIZE THE POWER-LAW MODEL, SET NUM_DIST TO ZERO
 * OR DELETE THE FOLLOWING DATA CARD)
 *
 108 NUM_DIST001 0
 *
 * POWER-LAW FUNCTION IS OF FORM: SIGMA = A * X ** B
 *
 * TADMOR ND GUR PARAMETRIZATION FOR DISTANCE RANGE 0.5 to 5.0 KM
 * (NUREG/CR-4551 PART 7 TABLE 2.4)
 *
 * P-G CLASS: A B C D E F
 109 DPCYSIGA001 0.3658 0.2751 0.2089 0.1474 0.1046 0.0722
 110 DPCYSIGB001 0.9031 0.9031 0.9031 0.9031 0.9031 0.9031
 111 DPCZSIGA001 2.5E-4 1.9E-3 0.2 0.3 0.4 0.2
 112 DPCZSIGB001 2.125 1.6021 0.8543 0.6532 0.6021 0.6020
 *
 * LINEAR SCALING FACTOR FOR SIGMA-Y FUNCTION, NORMALLY 1
 *
 113 DPYSCALE001 1.0
 *
 * LINEAR SCALING FACTOR FOR SIGMA-Z FUNCTION,
 * NORMALLY USED FOR SURFACE ROUGHNESS LENGTH CORRECTION.
 * (Z1 / Z0) ** 0.2, FROM CRAC2 WE HAVE (10 CM / 3 CM) ** 0.2 = 1.27
 * SEE NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
 114 DPZSCALE001 1.27



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

* * REF/BASIS:
* *
* * MACCS COMPUTES SIGMA-Y AND SIGMA-Z AS FOLLOWS:
* *
* * SIGMA-Y = A * X ** B
* *
* * SIGMA-Z = C * X ** D
* *
* * THE SIGMA-Y COEFFICIENTS (A AND B) AND SIGMA-Z COEFFICIENTS (C AND D)
* * ARE TAKEN FROM NUREG-4551, VOL. 2, REV. 1, PART 7, SECTION 2.4.
* *
* * NO SIGMA-Y SCALING IS REQUIRED/USED.
* *
* * SIGMA-Z SCALING VALUE CONSISTENT WITH SAMPLE PROBLEMS IN
* * NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
* *
* * PLUME MEANDER EXPANSION FACTOR DATA BLOCK
* *
* * TIME BASE FOR EXPANSION FACTOR (SECONDS)
* *
115 PMTIMBAS001 600.0 * 10 MINUTES
* *
* * BREAK POINT FOR FORMULA CHANGE (SECONDS)
* *
116 PMBRKPNT001 3600.0 * 1 HOUR
* *
* * EXPONENTIAL EXPANSION FACTOR NUMBER 1
* *
117 PMXPFFAC1001 0.2
* *
* * EXPONENTIAL EXPANSION FACTOR NUMBER 2
* *

```




Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.4-10 of 1.4-801
Non-Safety Related		Prepared by	Date
Client	PSEG Nuclear Development	Reviewed by	Date
Project	PSEG ESPA	Approved by	Date
Proj. No	12380-001	Equip. No.	

118 PMXPFAC2001 0.25

* REF/BASIS:

* ABOVE VALUES CONSISTENT WITH SECTION 2.3.2 FROM NUREG/CR-4551.

* PLUME RISE DATA BLOCK

* THE FOLLOWING SCALING FACTORS COULD BE USED TO MODIFY THE MACCS METHOD OF PERFORMING PLUME RISE CALCS.

* SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A BOUYANT PLUME (USED BY FUNCTION CAUGHT)

119 PRSCLRW001 1.0

* SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA (USED BY FUNCTION PLMRIS)

120 PRSCLADP001 1.0

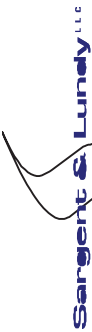
* SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA (USED BY FUNCTION PLMRIS)

121 PRSCLEFP001 1.0

* REF/BASIS:

* THE SCALING FACTORS CAN BE USED TO MODIFY THE RESULTS OF THE HARD-WIRED PLUME RISE CALCULATIONS PERFORMED BY MACCS. THIS FUNCTIONALITY IS NOT UTILIZED IN THIS ANALYSIS (SCALING FACTORS SET TO 1).

*



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

 * WAKE EFFECTS DATA BLOCK

* DETERMINATION OF WAKE EFFECTS HAS BEEN REVISED FOR MACCS2. THE WIDTH VARIABLE
 * IS NO LONGER INCLUDED. ADDITIONALLY, VALUES MUST BE INCLUDED FOR EACH PLUME.

* VENDOR DATA (ATTACHMENT A.4) :
 * BUILDING WIDTH = - m
 * BUILDING HEIGHT = 63.30 m

* INITIAL VALUE FOR SIGMA-Y FOR EACH PLUME (4)
 * SIGYINIT001 25.37 *INITIAL SIGMA-Y = W/4.3 = 25.37

* INITIAL VALUE FOR SIGMA-Z FOR EACH PLUME (4)
 * SIGZINIT001 28.98 *INITIAL SIGMA-Z = H/2.15 = 29.98

* BUILDING HEIGHT (METERS)
 * WEBUILDH001 63.30

 * RELEASE DATA BLOCK (1/2, SEE END OF FILE SECOND PORTION)

* PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP
 * UNIFORM SIZE DISTRIBUTION IS ASSUMED FOR ALL 9 CHEMICAL GROUPS

*
 * RDPSDIST001 1.0
 * RDPSDIST002 1.0
 * RDPSDIST003 1.0
 * RDPSDIST004 1.0
 * RDPSDIST005 1.0



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001	Equip. No.	Approved by	Date

130	RDPSDIST006	1.0			
131	RDPSDIST007	1.0			
132	RDPSDIST008	1.0			
133	RDPSDIST009	1.0			
* U.S. EPR CORE INVENTORY BASED ON VENDOR DATA (ATTACHMENT A.4)					
* NUCNAM					
* THE INVENTORY AS GIVEN BELOW IS IN UNITS OF Ci, IT NEEDS TO BE IN UNITS OF Bq					
* VARIABLE RDCORSCA001 IS SET TO 3.7E+10 FOR THE NECESSARY UNIT CONVERSION (Ci to Bq)					
* SEE USER'S GUIDE PG. 5-28					
134	RDCORINV001	Co-58	0.00E+00		
135	RDCORINV002	Co-60	0.00E+00		
136	RDCORINV003	Kr-85	2.10E+06		
137	RDCORINV004	Kr-85m	4.50E+07		
138	RDCORINV005	Kr-87	9.02E+07		
139	RDCORINV006	Kr-88	1.29E+08		
140	RDCORINV007	Rb-86	5.80E+05		
141	RDCORINV008	Sr-89	1.61E+08		
142	RDCORINV009	Sr-90	1.69E+07		
143	RDCORINV010	Sr-91	2.07E+08		
144	RDCORINV011	Sr-92	2.14E+08		
145	RDCORINV012	Y-90	1.79E+07		
146	RDCORINV013	Y-91	1.96E+08		
147	RDCORINV014	Y-92	2.14E+08		
148	RDCORINV015	Y-93	2.34E+08		
149	RDCORINV016	Zr-95	2.29E+08		
150	RDCORINV017	Zr-97	2.43E+08		
151	RDCORINV018	Nb-95	2.29E+08		
152	RDCORINV019	Mo-99	2.59E+08		
153	RDCORINV020	Tc-99m	2.27E+08		
154	RDCORINV021	Ru-103	2.42E+08		
155	RDCORINV022	Ru-105	1.96E+08		
156	RDCORINV023	Ru-106	1.43E+08		
157	RDCORINV024	Rh-105	1.75E+08		



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

158	RDCORINV025	Sb-127	1.80E+07
159	RDCORINV026	Sb-129	4.85E+07
160	RDCORINV027	Te-127	1.79E+07
161	RDCORINV028	Te-127m	2.43E+06
162	RDCORINV029	Te-129	4.78E+07
163	RDCORINV030	Te-129m	7.08E+06
164	RDCORINV031	Te-131m	2.04E+07
165	RDCORINV032	Te-132	1.98E+08
166	RDCORINV033	I-131	1.39E+08
167	RDCORINV034	I-132	2.01E+08
168	RDCORINV035	I-133	2.90E+08
169	RDCORINV036	I-134	3.18E+08
170	RDCORINV037	I-135	2.69E+08
171	RDCORINV038	Xe-133	2.89E+08
172	RDCORINV039	Xe-135	9.26E+07
173	RDCORINV040	Cs-134	6.48E+07
174	RDCORINV041	Cs-136	1.61E+07
175	RDCORINV042	Cs-137	2.47E+07
176	RDCORINV043	Ba-139	2.62E+08
177	RDCORINV044	Ba-140	2.52E+08
178	RDCORINV045	La-140	2.54E+08
179	RDCORINV046	La-141	2.41E+08
180	RDCORINV047	La-142	2.35E+08
181	RDCORINV048	Ce-141	2.24E+08
182	RDCORINV049	Ce-143	2.28E+08
183	RDCORINV050	Ce-144	1.70E+08
184	RDCORINV051	Pr-143	2.26E+08
185	RDCORINV052	Nd-147	9.44E+07
186	RDCORINV053	Np-239	3.82E+09
187	RDCORINV054	Pu-238	1.46E+06
188	RDCORINV055	Pu-239	6.14E+04
189	RDCORINV056	Pu-240	1.40E+05
190	RDCORINV057	Pu-241	2.53E+07
191	RDCORINV058	Am-241	2.88E+04
192	RDCORINV059	Cm-242	1.31E+07



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-14 of 1.4-801

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
Prepared by		Date
Reviewed by		Date
Approved by		Date

```

193 RDCORINV060 Cm-244 6.94E+06
*
* SCALING FACTOR TO ADJUST THE CORE INVENTORY
*
194 RDCORSCA001 3.7E+10 *SCALING FACTOR FOR CORE INVENTORY (Ci to Bq)
*
* DAUGHTER INGROWTH PRODUCTS RELEASED IN THE SAME PROPORTION AS THE PARENT
*
195 RDAPLFR001 PARENT
*
*****
* OUTPUT CONTROL DATA BLOCK
*****
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
*
196 OCENDAT1001 .FALSE. *SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC
*
197 OCIDEBUG001 0 * SKIPS DEBUG PRINTING
*
198 TYPE0NUMBER 0 *VALUE = 0 = NO ATMOSPHERIC (TYPE 0) RESULTS PRINTED
*
*****
* METEOROLOGICAL SAMPLING DATA BLOCK
*****
* METEOROLOGICAL SAMPLING OPTION CODE:
*
* METCOD = 1, USER SPECIFIED DAY AND HOUR IN THE YEAR (FROM MET FILE),
* 2, WEATHER CATEGORY BIN SAMPLING,
* 3, 120 HOURS OF WEATHER SPECIFIED ON THE ATMOS USER INPUT FILE,
* 4, CONSTANT MET (BOUNDARY WEATHER USED FROM THE START),
* 5, STRATIFIED RANDOM SAMPLES FOR EACH DAY OF THE YEAR.
*****
* METEOROLOGICAL SAMPLING (M1) DATA
*****
*****
199 M1METCOD001 2 * MET FILE PROVIDED IN ATTACHMENT C
*****

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No.	2009-11222	
Rev.	2	Date
Page	1.4-15	of 1.4-801

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

```

*
* LAST SPATIAL INTERVAL FOR MEASURED WEATHER
*
* *****
* BOUNDARY WEATHER (M2) DATA
* *****
200 M2LIMSPA001 10 * INTERVAL 10 = 50 MILES
*
* BOUNDARY WEATHER MIXING LAYER HEIGHT
*
201 M2BNDMXH001 1000.0 * METERS, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER STABILITY CLASS INDEX
*
202 M2IBDSTB001 4 * D-STABILITY, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER RAIN RATE
*
203 M2BNDRAN001 5.0 * MM/HR, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER WIND SPEED
*
204 M2BNDWND001 5.0 * M/S, USER'S GUIDE APPENDIX C
*
* *****
* METEOROLOGICAL BIN SAMPLING (M4) DATA
* *****
*
* NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
M4NRNINT001 5 * USER'S GUIDE APPENDIX C/NUREG 4551 APPENDIX A
*
* ENDPOINTS OF THE RAIN DISTANCE INTERVALS (KILOMETERS)
*
* NOTE: THESE MUST BE CHOSEN TO MATCH THE SPATIAL ENDPOINT DISTANCES

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-16 of 1.4-801

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

```

* SPECIFIED FOR ARRAY SPAEND (10 % ERROR IS ALLOWED)
*
*      2.0      5.0      10.0      30.0      50.0      MILES
*
206 M4RNDSTS001  3.22  8.05  16.1  48.3  80.5  *KM
*
* NUMBER OF RAIN INTENSITY BREAKPOINTS
*
207 M4NRINTN001  3      * USER'S GUIDE APPENDIX C
*
* RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
*
208 M4RNRATE001  2.0  4.0  6.0  * USER'S GUIDE APPENDIX C
*
* NUMBER OF WEATHER SAMPLES PER BIN
* USER'S GUIDE APPENDIX C USED 4. MORE SAMPLES ARE PREFERRED, BUT THIS INCREASES
* COMPUTING TIME. USED 12 IN THIS ANALYSIS - MORE ACCURATE WITH REASONABLE RUN TIME
*
209 M4NSMPLS001  12  *4 MINIMUM, 24 MAXIMUM
*
* INITIAL SEED FOR RANDOM NUMBER GENERATOR FOR WEATHER SAMPLING
*
210 M4IRSEED001  79
*****
* RELEASE DATA BLOCK (2/2)
*****
*
* SOURCE TERM NUMBER 1 OF 23
*****
211 RDATNAM2001      'RC101'      * SOURCE TITLE
212 RDOALARM001      8.68E+03      * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
213 RDNUMREL001      1          * NUMBER OF PLUMES MODELED
214 RDMAXRIS001      1          * RISK-DOMINANT PLUME

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-17	of	1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

		X	Non-Safety Related	
--	--	---	--------------------	--

215 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION

216 RDPLHEAT001 1.81E+04 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)

217 RDPLHITE001 60.5 * RELEASE HEIGHT OF EACH PLUME (METERS)

218 RDPLUDUR001 3.60E+4 * DURATION OF PLUMES

219 RDPDELAY001 1.44E+4 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)

*

	Xe/Kr	I	Cs	Te	Sr	Ru	La	Ce	Ba
220 RDRELFRC001	1.90E-03	2.40E-05	2.00E-05	5.30E-05	8.50E-06	4.40E-05	2.80E-07	7.30E-07	2.40E-05

***** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT *****

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ	= 516
NUMBER OF BLANK OR COMMENT RECORDS READ	= 295
NUMBER OF TERMINATOR RECORDS	= 1
NUMBER OF RECORDS PROCESSED	= 220
NUMBER OF PROCESSED RECORDS DUPLICATED	= 0
NUMBER OF PROCESSED RECORDS SORTED	= 220

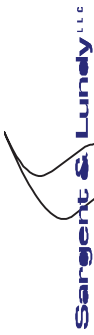
Decay Chain # Ba-139

Decay Chain # Ba-140 La-140
 Fraction of Ba-140 going to La-140 in this chain = 1.000000

Decay Chain # Ce-143 Pr-143
 Fraction of Ce-143 going to Pr-143 in this chain = 1.000000

Decay Chain # Ce-144

Decay Chain # Cm-242 Pu-238



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-18 of 1.4-801

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	Equip. No.	
Project	PSEG ESPA		
Proj. No	12380-001		

Fraction of Cm-242 going to Pu-238 in this chain = 1.000000

Decay Chain # Cm-244 Pu-240

Fraction of Cm-244 going to Pu-240 in this chain = 1.000000

Decay Chain # Co-58

Decay Chain # Co-60

Decay Chain # Cs-134

Decay Chain # Cs-136

Decay Chain # Cs-137

Decay Chain # I-133 Xe-133

Fraction of I-133 going to Xe-133 in this chain = 0.971000

Decay Chain # I-134

Decay Chain # I-135 Xe-135

Fraction of I-135 going to Xe-135 in this chain = 0.846000

Decay Chain # Kr-85m Kr-85

Fraction of Kr-85m going to Kr-85 in this chain = 0.211000

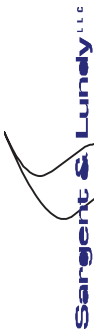
Decay Chain # Kr-87

Decay Chain # Kr-88

Decay Chain # La-141 Ce-141

Fraction of La-141 going to Ce-141 in this chain = 1.000000

Decay Chain # La-142



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-19 of 1.4-801

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

Decay Chain # Mo-99 Tc-99m
 Fraction of Mo-99 going to Tc-99m in this chain = 0.876000

Decay Chain # Nd-147

Decay Chain # Np-239 Pu-239
 Fraction of Np-239 going to Pu-239 in this chain = 1.000000

Decay Chain # Pu-241 Am-241
 Fraction of Pu-241 going to Am-241 in this chain = 1.000000

Decay Chain # Rb-86

Decay Chain # Ru-103

Decay Chain # Ru-105 Rh-105
 Fraction of Ru-105 going to Rh-105 in this chain = 1.000000

Decay Chain # Ru-106

Decay Chain # Sb-127 Te-127
 Fraction of Sb-127 going to Te-127 in this chain = 0.824000

Decay Chain # Sb-127 Te-127m Te-127
 Fraction of Sb-127 going to Te-127m in this chain = 0.176000
 Fraction of Sb-127 going to Te-127 in this chain = 0.171776
 Fraction of Te-127m going to Te-127 in this chain = 0.976000

Decay Chain # Sb-129 Te-129
 Fraction of Sb-129 going to Te-129 in this chain = 0.775000

Decay Chain # Sb-129 Te-129m Te-129
 Fraction of Sb-129 going to Te-129m in this chain = 0.225000
 Fraction of Sb-129 going to Te-129 in this chain = 0.146250
 Fraction of Te-129m going to Te-129 in this chain = 0.650000



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-20 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Safety Related	X	Non-Safety Related
Decay Chain # Sr-89		
Decay Chain # Sr-90		
Fraction of Sr-90 going to Y-90		in this chain = 1.000000
Decay Chain # Sr-91		
Fraction of Sr-91 going to Y-91		in this chain = 0.422000
Decay Chain # Sr-92		
Fraction of Sr-92 going to Y-92		in this chain = 1.000000
Decay Chain # Te-131m		
Fraction of Te-131m going to I-131		in this chain = 0.778000
Decay Chain # Te-132		
Fraction of Te-132 going to I-132		in this chain = 1.000000
Decay Chain # Y-93		
Decay Chain # Zr-95		
Fraction of Zr-95 going to Nb-95		in this chain = 0.993000

Decay Chain # Zr-97

RELEASED INVENTORY OF ALL PLUMES

Kr-85	1.48E+14
Kr-85m	7.86E+14
Kr-87	4.70E+13
Kr-88	1.01E+15
Rb-86	4.23E+11
Sr-89	5.04E+13
Sr-90	5.31E+12
Sr-91	3.38E+13



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

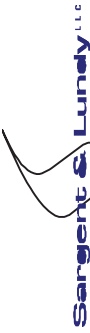
Rev. 2 Date

Safety Related Non-Safety Related

Page 1.4-21 of 1.4-801

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

Sr-92	6.73E+12
Y-90	6.62E+11
Y-91	2.11E+12
Y-92	1.61E+13
Y-93	1.31E+12
Zr-95	2.36E+12
Zr-97	1.74E+12
Nb-95	2.37E+12
Mo-99	3.84E+14
Tc-99m	3.57E+14
Ru-103	3.91E+14
Ru-105	7.83E+13
Ru-106	2.33E+14
Rh-105	2.66E+14
Sb-127	3.30E+13
Sb-129	2.24E+13
Te-127	3.39E+13
Te-127m	4.77E+12
Te-129	3.27E+13
Te-129m	1.39E+13
Te-131m	3.25E+13
Te-132	3.59E+14
I-131	1.20E+14
I-132	3.55E+14
I-133	1.91E+14
I-134	2.29E+11
I-135	9.30E+13
Xe-133	1.93E+16
Xe-135	3.34E+15
Cs-134	4.79E+13
Cs-136	1.17E+13
Cs-137	1.83E+13
Ba-139	2.52E+12
Ba-140	2.19E+14
La-140	3.40E+13



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
Safety Related		Date	
<input checked="" type="checkbox"/>	Non-Safety Related	Page	1.4-22 of 1.4-801
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

- La-141 5.10E+11
- La-142 4.26E+10
- Ce-141 6.01E+12
- Ce-143 5.10E+12
- Ce-144 4.59E+12
- Pr-143 2.40E+12
- Nd-147 9.55E+11
- Np-239 9.24E+13
- Pu-238 3.94E+10
- Pu-239 1.66E+09
- Pu-240 3.78E+09
- Pu-241 6.83E+11
- Am-241 2.99E+08
- Cm-242 1.35E+11
- Cm-244 7.19E+10

READING FROM A WEATHER FILE WITH THE FOLLOWING HEADER:

SL HC MET 2004 - SHCMET04.inp - Orig: G. Tegarden 7/22/08 Verf: M. Saunders 7/24
 DAY HR DRSP S PC - Supporting Calc: SLHC-MET.XLS

METEOROLOGICAL DATA FILE CONTAINS 505 HOURS OF OBSERVED RAIN DATA.

ACCUMULATED RAIN MEASUREMENTS TOTALED 43.71 INCHES FOR THE YEAR.

CONSTANT LID HEIGHTS (M) FOR 4 SEASONS = 1000 1700 1700 1200

NON-ZERO WINDSPEEDS LESS THAN 0.5 M/S ARE SET TO 0.5 M/S

NUMTRI= 390

* * * * * METEOROLOGICAL BIN SUMMARY * * * * *

BIN PRIORITIES

RI XX - RAIN INTENSITY I WITHIN THE INTERVAL ENDING AT XX

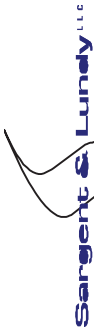
INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5 INTERVAL ENDPOINTS ARE 3 8 16 48 80

RAIN INTENSITIES ARE IN MILLIMETERS OF RAIN PER HOUR, THE 3 INTENSITY BREAKPOINTS ARE 2.0 4.0 6.0

S V - INITIAL WEATHER CONDITIONS WITH STABILITY CLASS S AND WIND SPEED INTERVAL V

STABILITY CLASSES ARE B = A/B, D = C/D, E = E, AND F = F

WIND SPEED INTERVALS ARE IN METERS PER SECOND, 1 (0-1), 2 (1-2), 3 (2-3), 4 (3-5), 5 (5-7), 6 (GT 7)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related		X	Non-Safety Related
Client PSEG Nuclear Development		Prepared by	
Project PSEG ESPA		Reviewed by	
Proj. No 12380-001		Approved by	
Equip. No.		Date	

METBIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL	PER CENT
WIND DIRECTION																		
1 B	3	0.192	0.000	0.269	0.038	0.115	0.077	0.000	0.038	0.038	0.000	0.000	0.000	0.077	0.000	0.115	26	0.2968
2 B	4	0.005	0.005	0.027	0.050	0.087	0.092	0.244	0.154	0.062	0.040	0.020	0.002	0.015	0.015	0.100	402	4.5890
3 D	1	0.000	0.030	0.061	0.000	0.000	0.061	0.030	0.091	0.091	0.212	0.121	0.091	0.121	0.030	0.061	33	0.3767
4 D	2	0.073	0.076	0.055	0.049	0.055	0.067	0.064	0.076	0.076	0.089	0.070	0.064	0.040	0.031	0.080	327	3.7329
5 D	3	0.085	0.076	0.118	0.066	0.069	0.055	0.055	0.069	0.070	0.054	0.049	0.054	0.046	0.021	0.040	669	7.6370
6 D	4	0.076	0.073	0.072	0.058	0.077	0.062	0.097	0.077	0.050	0.097	0.087	0.022	0.004	0.017	0.051	1279	14.6005
7 D	5	0.082	0.071	0.031	0.031	0.068	0.136	0.179	0.058	0.066	0.044	0.025	0.005	0.000	0.011	0.112	804	9.1781
8 D	6	0.014	0.007	0.011	0.007	0.032	0.202	0.245	0.097	0.014	0.011	0.007	0.000	0.000	0.007	0.260	277	3.1621
9 E	1	0.033	0.054	0.022	0.011	0.087	0.087	0.076	0.043	0.087	0.109	0.076	0.109	0.076	0.054	0.033	92	1.0502
10 E	2	0.035	0.046	0.053	0.064	0.059	0.057	0.073	0.064	0.059	0.092	0.088	0.090	0.101	0.031	0.033	455	5.1941
11 E	3	0.040	0.047	0.099	0.086	0.066	0.071	0.110	0.079	0.079	0.073	0.076	0.039	0.020	0.037	0.040	700	7.9909
12 E	4	0.064	0.092	0.060	0.082	0.073	0.076	0.132	0.080	0.097	0.043	0.019	0.006	0.002	0.021	0.104	1334	15.2283
13 F	1	0.083	0.021	0.063	0.021	0.063	0.104	0.042	0.021	0.021	0.125	0.042	0.125	0.125	0.104	0.000	48	0.5479
14 F	2	0.055	0.051	0.051	0.051	0.051	0.038	0.025	0.030	0.093	0.101	0.097	0.089	0.105	0.046	0.068	237	2.7055
15 F	3	0.022	0.022	0.071	0.045	0.029	0.035	0.071	0.074	0.115	0.074	0.119	0.032	0.006	0.061	0.176	312	3.5616
16 F	4	0.018	0.042	0.057	0.084	0.027	0.018	0.066	0.063	0.066	0.057	0.033	0.003	0.000	0.003	0.396	333	3.8014
17 R1	3	0.030	0.033	0.033	0.025	0.044	0.033	0.030	0.044	0.072	0.107	0.152	0.140	0.066	0.041	0.083	363	4.1438
18 R1	8	0.024	0.000	0.000	0.071	0.024	0.048	0.048	0.048	0.048	0.048	0.119	0.167	0.190	0.024	0.071	42	0.4795
19 R1	16	0.030	0.050	0.060	0.100	0.030	0.020	0.020	0.050	0.030	0.080	0.180	0.170	0.050	0.040	0.040	100	1.1416
20 R1	48	0.057	0.048	0.063	0.069	0.015	0.021	0.051	0.030	0.021	0.078	0.147	0.141	0.051	0.054	0.078	333	3.8014
21 R1	80	0.060	0.075	0.075	0.032	0.024	0.004	0.028	0.032	0.044	0.087	0.127	0.091	0.044	0.063	0.107	252	2.8767
22 R2	3	0.053	0.000	0.000	0.039	0.013	0.013	0.053	0.026	0.026	0.158	0.171	0.105	0.039	0.053	0.171	76	0.8676
23 R2	8	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.000	0.333	0.000	3	0.0342
24 R2	16	0.000	0.100	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.100	0.000	0.300	0.100	10	0.1142
25 R2	48	0.063	0.094	0.000	0.063	0.000	0.031	0.000	0.063	0.000	0.000	0.031	0.219	0.063	0.094	0.156	32	0.3653
26 R2	80	0.065	0.065	0.097	0.000	0.000	0.000	0.000	0.032	0.000	0.032	0.097	0.290	0.097	0.032	0.161	31	0.3539
27 R3	3	0.103	0.034	0.000	0.000	0.000	0.034	0.034	0.034	0.034	0.103	0.103	0.207	0.034	0.069	0.138	29	0.3311
28 R3	8	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.333	3	0.0342
29 R3	16	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.125	0.125	0.000	0.250	0.000	8	0.0913
30 R3	48	0.111	0.148	0.185	0.074	0.000	0.037	0.000	0.000	0.000	0.111	0.074	0.037	0.000	0.185	0.037	27	0.3082
31 R3	80	0.100	0.033	0.167	0.000	0.000	0.100	0.000	0.000	0.000	0.100	0.067	0.000	0.033	0.200	0.200	30	0.3425
32 R4	3	0.026	0.000	0.026	0.053	0.000	0.026	0.026	0.026	0.026	0.132	0.079	0.026	0.105	0.053	0.237	38	0.4338



Calcs. For **ENVIRONMENTAL CONSEQUENCE**
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No.	2009-11222	
Rev.	2	Date
Page	1.4-24	of 1.4-801

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

	0.056	0.059	0.062	0.057	0.058	0.067	0.101	0.069	0.066	0.069	0.046	0.027	0.028	0.099	0.067	8760
34 R4 16	0.000	0.167	0.000	0.000	0.000	0.000	0.000	0.000	0.167	0.167	0.000	0.000	0.167	0.167	0.000	6
35 R4 48	0.077	0.038	0.000	0.000	0.000	0.000	0.038	0.038	0.000	0.077	0.038	0.038	0.038	0.577	0.077	26
36 R4 80	0.130	0.087	0.000	0.000	0.000	0.087	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.478	0.174	23
37 ALL	0.056	0.059	0.062	0.057	0.058	0.067	0.101	0.069	0.066	0.069	0.046	0.027	0.028	0.099	0.067	8760



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related		Rev. 2 Date	
X Non-Safety Related		Page 1.4-25 of 1.4-801	
Client PSEG Nuclear Development		Prepared by	
Project PSEG ESPA		Reviewed by	
Proj. No 12380-001		Approved by	
Equip. No.		Date	

* * * * * METEOROLOGICAL BIN SUMMARY * * * * *

BIN PRIORITIES

RI XX - RAIN INTENSITY I WITHIN THE INTERVAL ENDING AT XX
 INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5 INTERVAL ENDPOINTS ARE 3 8 16 48 80
 RAIN INTENSITIES ARE IN MILLIMETERS OF RAIN PER HOUR, THE 3 INTENSITY BREAKPOINTS ARE 2.0 4.0 6.0

S V - INITIAL WEATHER CONDITIONS WITH STABILITY CLASS S AND WIND SPEED INTERVAL V
 STABILITY CLASSES ARE B = A/B, D = C/D, E = E, AND F = F
 WIND SPEED INTERVALS ARE IN METERS PER SECOND (M/S), 1 (0-1), 2 (1-2), 3 (2-3), 4 (3-5), 5 (5-7), 6 (GT 7)

METBIN	WIND DIRECTION																TOTAL	PER CENT	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
1 B	3	5	0	7	1	3	2	0	1	1	0	0	1	2	0	3	26	0.2968	
2 B	4	2	2	11	20	35	37	98	62	25	16	8	1	6	6	40	33	402	4.5890
3 D	1	0	1	2	0	0	2	1	3	3	7	4	3	4	1	0	2	33	0.3767
4 D	2	24	25	18	16	18	22	21	25	25	29	23	21	13	10	11	26	327	3.7329
5 D	3	57	51	79	44	46	37	37	46	47	36	33	36	31	14	27	48	669	7.6370
6 D	4	97	94	92	74	99	79	124	99	64	124	111	28	5	22	65	102	1279	14.6005
7 D	5	66	57	25	25	55	109	144	47	53	35	20	4	0	9	90	65	804	9.1781
8 D	6	4	2	3	2	9	56	68	27	4	3	2	0	0	2	72	23	277	3.1621
9 E	1	3	5	2	1	8	8	7	4	8	10	7	10	7	5	3	4	92	1.0502
10 E	2	16	21	24	29	27	26	33	29	27	42	40	41	46	14	15	25	455	5.1941
11 E	3	28	33	69	60	46	50	77	55	55	51	53	27	14	26	28	28	700	7.9909
12 E	4	85	123	80	109	98	102	176	107	129	57	26	8	3	28	139	64	1334	15.2283
13 F	1	4	1	3	1	3	5	2	1	1	6	2	6	2	6	5	0	48	0.5479
14 F	2	13	12	12	12	12	9	6	7	22	24	23	21	25	11	16	12	237	2.7055
15 F	3	7	7	22	14	9	11	22	23	36	23	37	10	2	19	55	15	312	3.5616
16 F	4	6	14	19	28	9	6	22	21	22	19	11	1	0	1	132	22	333	3.8014
17 R1	3	11	12	12	9	16	12	11	16	26	39	55	51	24	15	30	24	363	4.1438
18 R1	8	1	0	0	3	1	2	2	2	2	2	5	7	8	1	3	3	42	0.4795
19 R1	16	3	5	6	10	3	2	2	5	3	8	18	17	5	4	4	5	100	1.1416
20 R1	48	19	16	21	23	5	7	17	10	7	26	49	47	17	18	26	25	333	3.8014
21 R1	80	15	19	19	8	6	1	7	8	11	22	32	23	11	16	27	27	252	2.8767
22 R2	3	4	0	0	3	1	1	4	2	2	12	13	8	3	4	13	6	76	0.8676



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-29 of 1.4-801

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

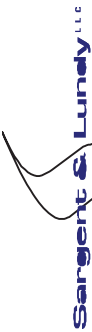
33	0.052	0.050	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000															
34	0.052	0.050	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000															
35	0.052	0.050	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000															
36	0.052	0.050	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000															
37	0.056	0.059	0.062	0.058	0.067	0.101	0.069	0.066	0.069	0.067	0.046	0.027	0.028	0.099	0.067
1.000000															

***** BEGINNING OF CHANGE CASE 1 USER INPUT *****

*

* SOURCE TERM NUMBER 2 OF 23

221 RDATNAM2001 'RC201' * SOURCE TITLE
 ***** RECORD NUMBER 221 REPLACES RECORD NUMBER 211 *****
 222 RDOALARM001 8.46E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 ***** RECORD NUMBER 222 REPLACES RECORD NUMBER 212 *****
 223 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 ***** RECORD NUMBER 223 REPLACES RECORD NUMBER 213 *****
 224 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 ***** RECORD NUMBER 224 REPLACES RECORD NUMBER 214 *****
 225 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 ***** RECORD NUMBER 225 REPLACES RECORD NUMBER 215 *****
 226 RDPLHEAT001 5.68E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 ***** RECORD NUMBER 226 REPLACES RECORD NUMBER 216 *****
 227 RDPLHITE001 0.839 * RELEASE HEIGHT OF EACH PLUME (METERS)
 ***** RECORD NUMBER 227 REPLACES RECORD NUMBER 217 *****
 228 RDPLDUR001 1.08E+03 * DURATION OF PLUMES
 ***** RECORD NUMBER 228 REPLACES RECORD NUMBER 218 *****
 229 RDPDELAY001 1.22E+4 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-30	of	1.4-801

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	<input checked="" type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> Non-Safety Related	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

***** RECORD NUMBER 229 REPLACES RECORD NUMBER 219 *****
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
230 RDRELFRC001 3.60E-01 1.00E-01 9.50E-02 7.60E-03 7.80E-05 1.10E-03 3.40E-06 1.70E-05 4.10E-04
***** RECORD NUMBER 230 REPLACES RECORD NUMBER 220 *****
*
***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 1 USER INPUT *****
  
```

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 1
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0
*****
  
```

RELEASED INVENTORY OF ALL PLUMES

Kr-85	2.80E+16
Kr-85m	3.47E+17
Kr-87	1.75E+17
Kr-88	7.24E+17
Rb-86	2.03E+15
Sr-89	4.64E+14
Sr-90	4.88E+13
Sr-91	4.61E+14
Sr-92	2.50E+14
Y-90	4.00E+12
Y-91	2.50E+13
Y-92	2.06E+14
Y-93	2.31E+13
Zr-95	2.88E+13
Zr-97	2.64E+13
Nb-95	2.88E+13
Mo-99	1.02E+16
Tc-99m	9.18E+15



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related Non-Safety Related

Page 1.4-31 of 1.4-801

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

Ru-103	9.82E+15
Ru-105	4.59E+15
Ru-106	5.82E+15
Rh-105	7.05E+15
Sb-127	4.93E+15
Sb-129	7.73E+15
Te-127	4.98E+15
Te-127m	6.83E+14
Te-129	9.21E+15
Te-129m	1.99E+15
Te-131m	5.29E+15
Te-132	5.40E+16
I-131	5.08E+17
I-132	2.92E+17
I-133	9.54E+17
I-134	7.17E+16
I-135	6.87E+17
Xe-133	3.79E+18
Xe-135	1.11E+18
Cs-134	2.28E+17
Cs-136	5.62E+16
Cs-137	8.68E+16
Ba-139	6.70E+14
Ba-140	3.79E+15
La-140	2.55E+14
La-141	1.62E+13
La-142	6.02E+12
Ce-141	1.41E+14
Ce-143	1.33E+14
Ce-144	1.07E+14
Pr-143	2.93E+13
Nd-147	1.18E+13
Np-239	2.30E+15
Pu-238	9.18E+11
Pu-239	3.86E+10



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-32 of 1.4-801

Safety Related X Non-Safety Related

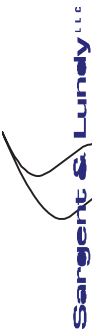
Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001 Equip. No.	Approved by
	Date
	Date
	Date

Pu-240 8.81E+10
 Pu-241 1.59E+13
 Am-241 3.63E+09
 Cm-242 1.65E+12
 Cm-244 8.73E+11

***** BEGINNING OF CHANGE CASE 2 USER INPUT *****

* SOURCE TERM NUMBER 3 OF 23

*
 231 RDATNAM2001 'RC202' * SOURCE TITLE
 ***** RECORD NUMBER 231 REPLACES RECORD NUMBER 211 *****
 232 RDOALARM001 8.46E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 ***** RECORD NUMBER 232 REPLACES RECORD NUMBER 212 *****
 233 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 ***** RECORD NUMBER 233 REPLACES RECORD NUMBER 213 *****
 234 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 ***** RECORD NUMBER 234 REPLACES RECORD NUMBER 214 *****
 235 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 ***** RECORD NUMBER 235 REPLACES RECORD NUMBER 215 *****
 236 RDPLHEAT001 2.25E+8 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 ***** RECORD NUMBER 236 REPLACES RECORD NUMBER 216 *****
 237 RDPLHITE001 0.839 * RELEASE HEIGHT OF EACH PLUME (METERS)
 ***** RECORD NUMBER 237 REPLACES RECORD NUMBER 217 *****
 238 RDPLUDUR001 3.10E+04 * DURATION OF PLUMES
 ***** RECORD NUMBER 238 REPLACES RECORD NUMBER 218 *****
 239 RDPDELAY001 1.22E+4 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
 ***** RECORD NUMBER 239 REPLACES RECORD NUMBER 219 *****
 *
 * Xe/Kr I Cs Te Sr Ru La Ce Ba
 240 RDRELFRC001 7.90E-01 2.30E-02 1.50E-02 2.00E-02 2.40E-04 3.40E-03 1.90E-05 6.80E-05 2.40E-03
 ***** RECORD NUMBER 240 REPLACES RECORD NUMBER 220 *****



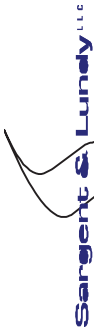
Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 2 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 2
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

Kr-85	6.14E+16
Kr-85m	4.00E+17
Kr-87	3.98E+16
Kr-88	5.77E+17
Rb-86	3.18E+14
Sr-89	1.42E+15
Sr-90	1.50E+14
Sr-91	1.05E+15
Sr-92	2.66E+14
Y-90	2.36E+13
Y-91	1.40E+14
Y-92	5.42E+14
Y-93	9.70E+13
Zr-95	1.60E+14
Zr-97	1.25E+14
Nb-95	1.61E+14
Mo-99	3.01E+16
Tc-99m	2.78E+16
Ru-103	3.03E+16
Ru-105	7.42E+15
Ru-106	1.80E+16
Rh-105	2.09E+16
Sb-127	1.26E+16



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

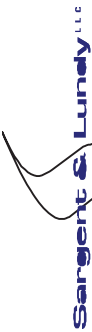
Rev. 2 Date

Safety Related Non-Safety Related

Page 1.4-34 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Sb-129	1.04E+16
Te-127	1.29E+16
Te-127m	1.80E+15
Te-129	1.44E+16
Te-129m	5.24E+15
Te-131m	1.26E+16
Te-132	1.37E+17
I-131	1.15E+17
I-132	1.43E+17
I-133	1.91E+17
I-134	6.17E+14
I-135	1.02E+17
Xe-133	8.11E+18
Xe-135	1.56E+18
Cs-134	3.60E+16
Cs-136	8.79E+15
Cs-137	1.37E+16
Ba-139	4.86E+14
Ba-140	2.20E+16
La-140	2.91E+15
La-141	4.36E+13
La-142	5.19E+12
Ce-141	5.60E+14
Ce-143	4.88E+14
Ce-144	4.27E+14
Pr-143	1.65E+14
Nd-147	6.50E+13
Np-239	8.75E+15
Pu-238	3.67E+12
Pu-239	1.55E+11
Pu-240	3.52E+11
Pu-241	6.37E+13
Am-241	2.03E+10
Cm-242	9.20E+12
Cm-244	4.88E+12



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

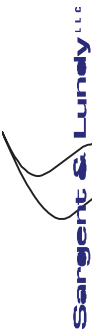
Rev.	2	Date
Page	1.4-35	of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

***** BEGINNING OF CHANGE CASE 3 USER INPUT *****
*
* SOURCE TERM NUMBER 4 OF 23
*
241 RDATNAM2001 'RC203' * SOURCE TITLE
***** RECORD NUMBER 241 REPLACES RECORD NUMBER 211 *****
242 RDOALARM001 8.46E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 242 REPLACES RECORD NUMBER 212 *****
243 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 243 REPLACES RECORD NUMBER 213 *****
244 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 244 REPLACES RECORD NUMBER 214 *****
245 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 245 REPLACES RECORD NUMBER 215 *****
246 RDPHEAT001 2.50E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 246 REPLACES RECORD NUMBER 216 *****
247 RDPWHITE001 0.839 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 247 REPLACES RECORD NUMBER 217 *****
248 RDPLUDUR001 3.10E+04 * DURATION OF PLUMES
***** RECORD NUMBER 248 REPLACES RECORD NUMBER 218 *****
249 RDPDELAY001 1.22E+4 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
***** RECORD NUMBER 249 REPLACES RECORD NUMBER 219 *****
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
250 RDRELFRC001 8.90E-01 5.30E-02 2.80E-02 1.60E-01 1.40E-04 6.80E-03 1.50E-05 2.40E-04 2.20E-03
***** RECORD NUMBER 250 REPLACES RECORD NUMBER 220 *****
*
***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 3 USER INPUT *****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.4-36 of 1.4-801	
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

NUMBER OF RECORDS ADDED ***** = 0 *****

RELEASED INVENTORY OF ALL PLUMES

- Kr-85 6.92E+16
- Kr-85m 4.51E+17
- Kr-87 4.48E+16
- Kr-88 6.50E+17
- Rb-86 5.94E+14
- Sr-89 8.30E+14
- Sr-90 8.75E+13
- Sr-91 6.12E+14
- Sr-92 1.55E+14
- Y-90 1.61E+13
- Y-91 1.10E+14
- Y-92 3.23E+14
- Y-93 7.66E+13
- Zr-95 1.27E+14
- Zr-97 9.84E+13
- Nb-95 1.27E+14
- Mo-99 6.01E+16
- Tc-99m 5.56E+16
- Ru-103 6.05E+16
- Ru-105 1.48E+16
- Ru-106 3.60E+16
- Rh-105 4.18E+16
- Sb-127 1.01E+17
- Sb-129 8.35E+16
- Te-127 1.03E+17
- Te-127m 1.44E+16
- Te-129 1.15E+17
- Te-129m 4.19E+16



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page 1.4-37 of 1.4-801

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Te-131m	1.01E+17			
Te-132	1.09E+18			
I-131	2.67E+17			
I-132	1.05E+18			
I-133	4.40E+17			
I-134	1.42E+15			
I-135	2.35E+17			
Xe-133	9.14E+18			
Xe-135	1.83E+18			
Cs-134	6.71E+16			
Cs-136	1.64E+16			
Cs-137	2.56E+16			
Ba-139	4.45E+14			
Ba-140	2.02E+16			
La-140	2.65E+15			
La-141	3.44E+13			
La-142	4.10E+12			
Ce-141	1.98E+15			
Ce-143	1.72E+15			
Ce-144	1.51E+15			
Pr-143	1.54E+14			
Nd-147	5.13E+13			
Np-239	3.09E+16			
Pu-238	1.30E+13			
Pu-239	5.46E+11			
Pu-240	1.24E+12			
Pu-241	2.25E+14			
Am-241	1.63E+10			
Cm-242	7.26E+12			
Cm-244	3.85E+12			



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-38 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

* SOURCE TERM NUMBER 5 OF 23
*****
*
251 RDATNAM2001 'RC204' * SOURCE TITLE
***** RECORD NUMBER 251 REPLACES RECORD NUMBER 211 *****
252 RDOALARM001 8.46E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 252 REPLACES RECORD NUMBER 212 *****
253 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 253 REPLACES RECORD NUMBER 213 *****
254 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 254 REPLACES RECORD NUMBER 214 *****
255 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 255 REPLACES RECORD NUMBER 215 *****
256 RDPLHEAT001 2.60E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 256 REPLACES RECORD NUMBER 216 *****
257 RDPLHITE001 0.839 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 257 REPLACES RECORD NUMBER 217 *****
258 RDPLUDUR001 2.92E+04 * DURATION OF PLUMES
***** RECORD NUMBER 258 REPLACES RECORD NUMBER 218 *****
259 RDPDELAY001 1.22E+4 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
***** RECORD NUMBER 259 REPLACES RECORD NUMBER 219 *****
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
260 RDRELFRC001 9.50E-01 2.80E-02 1.60E-02 3.60E-02 1.70E-04 5.30E-03 1.40E-05 6.20E-05 3.20E-03
***** RECORD NUMBER 260 REPLACES RECORD NUMBER 220 *****
*
***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 4 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 4
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0
*****

```



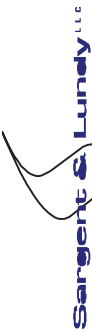
Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-39 of 1.4-801

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

RELEASED INVENTORY OF ALL PLUMES

- Kr-85 7.38E+16
- Kr-85m 5.00E+17
- Kr-87 5.48E+16
- Kr-88 7.37E+17
- Rb-86 3.39E+14
- Sr-89 1.01E+15
- Sr-90 1.06E+14
- Sr-91 7.56E+14
- Sr-92 2.01E+14
- Y-90 1.68E+13
- Y-91 1.03E+14
- Y-92 3.94E+14
- Y-93 7.27E+13
- Zr-95 1.18E+14
- Zr-97 9.28E+13
- Nb-95 1.19E+14
- Mo-99 4.70E+16
- Tc-99m 4.34E+16
- Ru-103 4.72E+16
- Ru-105 1.20E+16
- Ru-106 2.80E+16
- Rh-105 3.27E+16
- Sb-127 2.27E+16
- Sb-129 1.96E+16
- Te-127 2.32E+16
- Te-127m 3.24E+15
- Te-129 2.67E+16
- Te-129m 9.42E+15
- Te-131m 2.29E+16
- Te-132 2.47E+17
- I-131 1.41E+17
- I-132 2.48E+17
- I-133 2.34E+17



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-40 of 1.4-801

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

- I-134 9.15E+14
- I-135 1.28E+17
- Xe-133 9.76E+18
- Xe-135 1.91E+18
- Cs-134 3.84E+16
- Cs-136 9.38E+15
- Cs-137 1.46E+16
- Ba-139 7.34E+14
- Ba-140 2.93E+16
- La-140 3.67E+15
- La-141 3.36E+13
- La-142 4.28E+12
- Ce-141 5.11E+14
- Ce-143 4.47E+14
- Ce-144 3.90E+14
- Pr-143 1.23E+14
- Nd-147 4.80E+13
- Np-239 8.00E+15
- Pu-238 3.35E+12
- Pu-239 1.41E+11
- Pu-240 3.21E+11
- Pu-241 5.80E+13
- Am-241 1.50E+10
- Cm-242 6.78E+12
- Cm-244 3.59E+12

***** BEGINNING OF CHANGE CASE 5 USER INPUT *****

* *****

* SOURCE TERM NUMBER 6 OF 23

* *****

261 RDATNAM2001 'RC205' * SOURCE TITLE
 ***** RECORD NUMBER 261 REPLACES RECORD NUMBER 211 *****



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-41 of 1.4-801

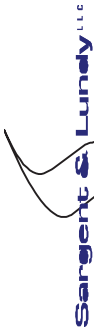
Safety Related	X Non-Safety Related
Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

262 RDOALARM001 8.46E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 ***** RECORD NUMBER 262 REPLACES RECORD NUMBER 212 *****
 263 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 ***** RECORD NUMBER 263 REPLACES RECORD NUMBER 213 *****
 264 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 ***** RECORD NUMBER 264 REPLACES RECORD NUMBER 214 *****
 265 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 ***** RECORD NUMBER 265 REPLACES RECORD NUMBER 215 *****
 266 RDPLHEAT001 3.08E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 ***** RECORD NUMBER 266 REPLACES RECORD NUMBER 216 *****
 267 RDPLHITE001 0.839 * RELEASE HEIGHT OF EACH PLUME (METERS)
 ***** RECORD NUMBER 267 REPLACES RECORD NUMBER 217 *****
 268 RDPLUDUR001 2.92E+04 * DURATION OF PLUMES
 ***** RECORD NUMBER 268 REPLACES RECORD NUMBER 218 *****
 269 RDPDELAY001 1.22E+4 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
 ***** RECORD NUMBER 269 REPLACES RECORD NUMBER 219 *****
 *
 * Xe/Kr I Cs Te Sr Ru La Ce Ba
 270 RDRELFRC001 9.80E-01 5.70E-02 3.60E-02 9.30E-02 4.00E-03 9.80E-03 3.00E-04 5.30E-04 6.10E-03
 ***** RECORD NUMBER 270 REPLACES RECORD NUMBER 220 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 5 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 5
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES
 Kr-85 7.62E+16
 Kr-85m 5.16E+17
 Kr-87 5.65E+16



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-42 of 1.4-801

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

Kr-88	7.60E+17
Rb-86	7.64E+14
Sr-89	2.37E+16
Sr-90	2.50E+15
Sr-91	1.78E+16
Sr-92	4.72E+15
Y-90	3.77E+14
Y-91	2.20E+15
Y-92	9.22E+15
Y-93	1.56E+15
Zr-95	2.53E+15
Zr-97	1.99E+15
Nb-95	2.54E+15
Mo-99	8.69E+16
Tc-99m	8.02E+16
Ru-103	8.73E+16
Ru-105	2.22E+16
Ru-106	5.18E+16
Rh-105	6.05E+16
Sb-127	5.86E+16
Sb-129	5.05E+16
Te-127	5.99E+16
Te-127m	8.37E+15
Te-129	6.91E+16
Te-129m	2.43E+16
Te-131m	5.91E+16
Te-132	6.38E+17
I-131	2.87E+17
I-132	6.28E+17
I-133	4.77E+17
I-134	1.86E+15
I-135	2.60E+17
Xe-133	1.01E+19
Xe-135	2.04E+18
Cs-134	8.63E+16



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-43 of 1.4-801

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date
Equip. No.		

- Cs-136 2.11E+16
- Cs-137 3.29E+16
- Ba-139 1.40E+15
- Ba-140 5.59E+16
- La-140 9.26E+15
- La-141 7.20E+14
- La-142 9.18E+13
- Ce-141 4.37E+15
- Ce-143 3.82E+15
- Ce-144 3.33E+15
- Pr-143 2.53E+15
- Nd-147 1.03E+15
- Np-239 6.84E+16
- Pu-238 2.86E+13
- Pu-239 1.21E+12
- Pu-240 2.75E+12
- Pu-241 4.96E+14
- Am-241 3.20E+11
- Cm-242 1.45E+14
- Cm-244 7.70E+13

***** BEGINNING OF CHANGE CASE 6 USER INPUT *****

* SOURCE TERM NUMBER 7 OF 23

271 RDATNAM2001 'RC206' * SOURCE TITLE
 ***** RECORD NUMBER 271 REPLACES RECORD NUMBER 211 *****
 272 RDOALARM001 8.53E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 ***** RECORD NUMBER 272 REPLACES RECORD NUMBER 212 *****
 273 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 ***** RECORD NUMBER 273 REPLACES RECORD NUMBER 213 *****
 274 RDMAXRIS001 1 * RISK-DOMINANT PLUME



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-44 of 1.4-801

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

```

***** RECORD NUMBER 274 REPLACES RECORD NUMBER 214 *****
275 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 275 REPLACES RECORD NUMBER 215 *****
276 RDPLHEAT001 2.04E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 276 REPLACES RECORD NUMBER 216 *****
277 RDPLHITE001 0.827 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 277 REPLACES RECORD NUMBER 217 *****
278 RDPLUDUR001 2.48E+04 * DURATION OF PLUMES
***** RECORD NUMBER 278 REPLACES RECORD NUMBER 218 *****
279 RDPDELAY001 1.30E+04 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
***** RECORD NUMBER 279 REPLACES RECORD NUMBER 219 *****
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
280 RDRELFRC001 1.90E-01 5.60E-03 5.00E-03 9.00E-03 1.20E-03 7.30E-03 5.50E-05 1.80E-04 4.20E-03
***** RECORD NUMBER 280 REPLACES RECORD NUMBER 220 *****
***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 6 USER INPUT *****

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 6

NUMBER OF RECORDS CHANGED = 10

NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

```

Kr-85 1.48E+16
Kr-85m 1.06E+17
Kr-87 1.36E+16
Kr-88 1.62E+17
Rb-86 1.06E+14
Sr-89 7.12E+15
Sr-90 7.50E+14
Sr-91 5.49E+15

```



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

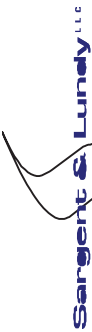
Rev. 2 Date

Safety Related Non-Safety Related

Page 1.4-45 of 1.4-801

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

Sr-92	1.56E+15
Y-90	8.89E+13
Y-91	4.08E+14
Y-92	2.80E+15
Y-93	2.93E+14
Zr-95	4.65E+14
Zr-97	3.70E+14
Nb-95	4.66E+14
Mo-99	6.50E+16
Tc-99m	5.99E+16
Ru-103	6.50E+16
Ru-105	1.76E+16
Ru-106	3.86E+16
Rh-105	4.53E+16
Sb-127	5.68E+15
Sb-129	5.21E+15
Te-127	5.81E+15
Te-127m	8.10E+14
Te-129	7.01E+15
Te-129m	2.36E+15
Te-131m	5.77E+15
Te-132	6.19E+16
I-131	2.82E+16
I-132	6.07E+16
I-133	4.75E+16
I-134	2.49E+14
I-135	2.66E+16
Xe-133	1.96E+18
Xe-135	3.94E+17
Cs-134	1.20E+16
Cs-136	2.93E+15
Cs-137	4.57E+15
Ba-139	1.17E+15
Ba-140	3.85E+16
La-140	4.90E+15



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-46 of 1.4-801

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

- La-141 1.41E+14
- La-142 2.00E+13
- Ce-141 1.48E+15
- Ce-143 1.31E+15
- Ce-144 1.13E+15
- Pr-143 4.74E+14
- Nd-147 1.89E+14
- Np-239 2.33E+16
- Pu-238 9.72E+12
- Pu-239 4.09E+11
- Pu-240 9.32E+11
- Pu-241 1.68E+14
- Am-241 5.88E+10
- Cm-242 2.66E+13
- Cm-244 1.41E+13

***** BEGINNING OF CHANGE CASE 7 USER INPUT *****

***** SOURCE TERM NUMBER 8 OF 23 *****

***** SOURCE TERM NUMBER 8 OF 23 *****

```

281 RDATNAM2001 'RC301' * SOURCE TITLE
***** RECORD NUMBER 281 REPLACES RECORD NUMBER 211 *****
282 RDOALARM001 8.46E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 282 REPLACES RECORD NUMBER 212 *****
283 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 283 REPLACES RECORD NUMBER 213 *****
284 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 284 REPLACES RECORD NUMBER 214 *****
285 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 285 REPLACES RECORD NUMBER 215 *****
286 RDPLHEAT001 2.25E+8 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 286 REPLACES RECORD NUMBER 216 *****

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page	1.4-47	of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

```

287 RDPLHITE001 0.839 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 287 REPLACES RECORD NUMBER 217 *****
288 RDPLUDUR001 3.10E+04 * DURATION OF PLUMES
***** RECORD NUMBER 288 REPLACES RECORD NUMBER 218 *****
289 RDPDELAY001 1.22E+4 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
***** RECORD NUMBER 289 REPLACES RECORD NUMBER 219 *****
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
290 RDRELFRC001 7.90E-01 2.30E-02 1.50E-02 2.00E-02 2.40E-04 3.40E-03 1.90E-05 6.80E-05 2.40E-03
***** RECORD NUMBER 290 REPLACES RECORD NUMBER 220 *****

```

```

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 7 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 7
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0
*****

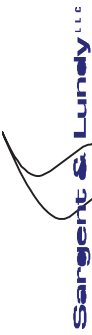
```

RELEASED INVENTORY OF ALL PLUMES

```

Kr-85 6.14E+16
Kr-85m 4.00E+17
Kr-87 3.98E+16
Kr-88 5.77E+17
Rb-86 3.18E+14
Sr-89 1.42E+15
Sr-90 1.50E+14
Sr-91 1.05E+15
Sr-92 2.66E+14
Y-90 2.36E+13
Y-91 1.40E+14
Y-92 5.42E+14
Y-93 9.70E+13

```



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related Non-Safety Related

Page 1.4-48 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Zr-95	1.60E+14
Zr-97	1.25E+14
Nb-95	1.61E+14
Mo-99	3.01E+16
Tc-99m	2.78E+16
Ru-103	3.03E+16
Ru-105	7.42E+15
Ru-106	1.80E+16
Rh-105	2.09E+16
Sb-127	1.26E+16
Sb-129	1.04E+16
Te-127	1.29E+16
Te-127m	1.80E+15
Te-129	1.44E+16
Te-129m	5.24E+15
Te-131m	1.26E+16
Te-132	1.37E+17
I-131	1.15E+17
I-132	1.43E+17
I-133	1.91E+17
I-134	6.17E+14
I-135	1.02E+17
Xe-133	8.11E+18
Xe-135	1.56E+18
Cs-134	3.60E+16
Cs-136	8.79E+15
Cs-137	1.37E+16
Ba-139	4.86E+14
Ba-140	2.20E+16
La-140	2.91E+15
La-141	4.36E+13
La-142	5.19E+12
Ce-141	5.60E+14
Ce-143	4.88E+14
Ce-144	4.27E+14



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-49 of 1.4-801

Safety Related X Non-Safety Related

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

Pr-143 1.65E+14
Nd-147 6.50E+13
Np-239 8.75E+15
Pu-238 3.67E+12
Pu-239 1.55E+11
Pu-240 3.52E+11
Pu-241 6.37E+13
Am-241 2.03E+10
Cm-242 9.20E+12
Cm-244 4.88E+12

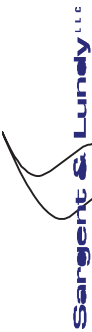
***** BEGINNING OF CHANGE CASE 8 USER INPUT *****

* SOURCE TERM NUMBER 9 OF 23

```

291 RDATNAM2001 'RC302' * SOURCE TITLE
***** RECORD NUMBER 291 REPLACES RECORD NUMBER 211 *****
292 RDOALARM001 8.46E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 292 REPLACES RECORD NUMBER 212 *****
293 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 293 REPLACES RECORD NUMBER 213 *****
294 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 294 REPLACES RECORD NUMBER 214 *****
295 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 295 REPLACES RECORD NUMBER 215 *****
296 RDPLHEAT001 2.50E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 296 REPLACES RECORD NUMBER 216 *****
297 RDPLHITE001 0.839 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 297 REPLACES RECORD NUMBER 217 *****
298 RDPLUDUR001 3.10E+04 * DURATION OF PLUMES
***** RECORD NUMBER 298 REPLACES RECORD NUMBER 218 *****
299 RDPDELAY001 1.22E+4 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)

```

**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-50	of	1.4-801

Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Safety Related	X	Non-Safety Related
	Prepared by		Date
	Reviewed by		Date
	Approved by		Date

```

***** RECORD NUMBER 299 REPLACES RECORD NUMBER 219 *****
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
300 RDRELFRC001 8.90E-01 5.30E-02 2.80E-02 1.60E-01 1.40E-04 6.80E-03 1.50E-05 2.40E-04 2.20E-03
***** RECORD NUMBER 300 REPLACES RECORD NUMBER 220 *****
*
***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 8 USER INPUT *****

```

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 8
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0
*****

```

RELEASED INVENTORY OF ALL PLUMES

```

Kr-85 6.92E+16
Kr-85m 4.51E+17
Kr-87 4.48E+16
Kr-88 6.50E+17
Rb-86 5.94E+14
Sr-89 8.30E+14
Sr-90 8.75E+13
Sr-91 6.12E+14
Sr-92 1.55E+14
Y-90 1.61E+13
Y-91 1.10E+14
Y-92 3.23E+14
Y-93 7.66E+13
Zr-95 1.27E+14
Zr-97 9.84E+13
Nb-95 1.27E+14
Mo-99 6.01E+16
TC-99m 5.56E+16

```



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-51 of 1.4-801

Client PSEG Nuclear Development	<input type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> Non-Safety Related
Project PSEG ESPA	Prepared by	
Proj. No 12380-001	Reviewed by	
Equip. No.	Approved by	
	Date	Date
	Date	Date

Ru-103	6.05E+16								
Ru-105	1.48E+16								
Ru-106	3.60E+16								
Rh-105	4.18E+16								
Sb-127	1.01E+17								
Sb-129	8.35E+16								
Te-127	1.03E+17								
Te-127m	1.44E+16								
Te-129	1.15E+17								
Te-129m	4.19E+16								
Te-131m	1.01E+17								
Te-132	1.09E+18								
I-131	2.67E+17								
I-132	1.05E+18								
I-133	4.40E+17								
I-134	1.42E+15								
I-135	2.35E+17								
Xe-133	9.14E+18								
Xe-135	1.83E+18								
Cs-134	6.71E+16								
Cs-136	1.64E+16								
Cs-137	2.56E+16								
Ba-139	4.45E+14								
Ba-140	2.02E+16								
La-140	2.65E+15								
La-141	3.44E+13								
La-142	4.10E+12								
Ce-141	1.98E+15								
Ce-143	1.72E+15								
Ce-144	1.51E+15								
Pr-143	1.54E+14								
Nd-147	5.13E+13								
Np-239	3.09E+16								
Pu-238	1.30E+13								
Pu-239	5.46E+11								



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page	1.4-52	of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

Pu-240 1.24E+12
 Pu-241 2.25E+14
 Am-241 1.63E+10
 Cm-242 7.26E+12
 Cm-244 3.85E+12

***** BEGINNING OF CHANGE CASE 9 USER INPUT *****

* SOURCE TERM NUMBER 10 OF 23

301 RDATNAM2001 'RC303' * SOURCE TITLE
 ***** RECORD NUMBER 301 REPLACES RECORD NUMBER 211 *****
 302 RDOALARM001 8.46E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 ***** RECORD NUMBER 302 REPLACES RECORD NUMBER 212 *****
 303 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 ***** RECORD NUMBER 303 REPLACES RECORD NUMBER 213 *****
 304 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 ***** RECORD NUMBER 304 REPLACES RECORD NUMBER 214 *****
 305 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 ***** RECORD NUMBER 305 REPLACES RECORD NUMBER 215 *****
 306 RDPLHEAT001 2.60E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 ***** RECORD NUMBER 306 REPLACES RECORD NUMBER 216 *****
 307 RDPLHITE001 0.839 * RELEASE HEIGHT OF EACH PLUME (METERS)
 ***** RECORD NUMBER 307 REPLACES RECORD NUMBER 217 *****
 308 RDPLUDUR001 2.92E+04 * DURATION OF PLUMES
 ***** RECORD NUMBER 308 REPLACES RECORD NUMBER 218 *****
 309 RDPDELAY001 1.22E+4 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
 ***** RECORD NUMBER 309 REPLACES RECORD NUMBER 219 *****

*
 * Xe/Kr I Cs Te Sr Ru La Ce Ba
 310 RDRELFRC001 9.50E-01 2.80E-02 1.60E-02 3.60E-02 1.70E-04 5.30E-03 1.40E-05 6.20E-05 3.20E-03
 ***** RECORD NUMBER 310 REPLACES RECORD NUMBER 220 *****



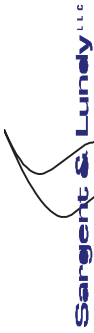
Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 9 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 9
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

Kr-85	7.38E+16
Kr-85m	5.00E+17
Kr-87	5.48E+16
Kr-88	7.37E+17
Rb-86	3.39E+14
Sr-89	1.01E+15
Sr-90	1.06E+14
Sr-91	7.56E+14
Sr-92	2.01E+14
Y-90	1.68E+13
Y-91	1.03E+14
Y-92	3.94E+14
Y-93	7.27E+13
Zr-95	1.18E+14
Zr-97	9.28E+13
Nb-95	1.19E+14
Mo-99	4.70E+16
Tc-99m	4.34E+16
Ru-103	4.72E+16
Ru-105	1.20E+16
Ru-106	2.80E+16
Rh-105	3.27E+16
Sb-127	2.27E+16



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related Non-Safety Related

Page 1.4-54 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Sb-129	1.96E+16
Te-127	2.32E+16
Te-127m	3.24E+15
Te-129	2.67E+16
Te-129m	9.42E+15
Te-131m	2.29E+16
Te-132	2.47E+17
I-131	1.41E+17
I-132	2.48E+17
I-133	2.34E+17
I-134	9.15E+14
I-135	1.28E+17
Xe-133	9.76E+18
Xe-135	1.91E+18
Cs-134	3.84E+16
Cs-136	9.38E+15
Cs-137	1.46E+16
Ba-139	7.34E+14
Ba-140	2.93E+16
La-140	3.67E+15
La-141	3.36E+13
La-142	4.28E+12
Ce-141	5.11E+14
Ce-143	4.47E+14
Ce-144	3.90E+14
Pr-143	1.23E+14
Nd-147	4.80E+13
Np-239	8.00E+15
Pu-238	3.35E+12
Pu-239	1.41E+11
Pu-240	3.21E+11
Pu-241	5.80E+13
Am-241	1.50E+10
Cm-242	6.78E+12
Cm-244	3.59E+12



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

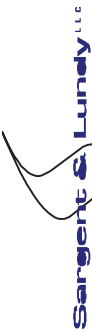
Rev.	2	Date
Page	1.4-55	of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

***** BEGINNING OF CHANGE CASE 10 USER INPUT *****
*
* SOURCE TERM NUMBER 11 OF 23
*
311 RDATNAM2001 'RC304' * SOURCE TITLE
***** RECORD NUMBER 311 REPLACES RECORD NUMBER 211 *****
312 RDOALARM001 8.46E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 312 REPLACES RECORD NUMBER 212 *****
313 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 313 REPLACES RECORD NUMBER 213 *****
314 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 314 REPLACES RECORD NUMBER 214 *****
315 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 315 REPLACES RECORD NUMBER 215 *****
316 RDPLHEAT001 3.08E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 316 REPLACES RECORD NUMBER 216 *****
317 RDPLHITE001 0.839 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 317 REPLACES RECORD NUMBER 217 *****
318 RDPLUDUR001 2.92E+04 * DURATION OF PLUMES
***** RECORD NUMBER 318 REPLACES RECORD NUMBER 218 *****
319 RDPDELAY001 1.22E+4 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
***** RECORD NUMBER 319 REPLACES RECORD NUMBER 219 *****
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
320 RDRELFRC001 9.80E-01 5.70E-02 3.60E-02 9.30E-02 4.00E-03 9.80E-03 3.00E-04 5.30E-04 6.10E-03
***** RECORD NUMBER 320 REPLACES RECORD NUMBER 220 *****
*
***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 10 USER INPUT *****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

NUMBER OF RECORDS ADDED ***** = 0 *****

RELEASED INVENTORY OF ALL PLUMES

- Kr-85 7.62E+16
- Kr-85m 5.16E+17
- Kr-87 5.65E+16
- Kr-88 7.60E+17
- Rb-86 7.64E+14
- Sr-89 2.37E+16
- Sr-90 2.50E+15
- Sr-91 1.78E+16
- Sr-92 4.72E+15
- Y-90 3.77E+14
- Y-91 2.20E+15
- Y-92 9.22E+15
- Y-93 1.56E+15
- Zr-95 2.53E+15
- Zr-97 1.99E+15
- Nb-95 2.54E+15
- Mo-99 8.69E+16
- Tc-99m 8.02E+16
- Ru-103 8.73E+16
- Ru-105 2.22E+16
- Ru-106 5.18E+16
- Rh-105 6.05E+16
- Sb-127 5.86E+16
- Sb-129 5.05E+16
- Te-127 5.99E+16
- Te-127m 8.37E+15
- Te-129 6.91E+16
- Te-129m 2.43E+16



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page 1.4-57 of 1.4-801

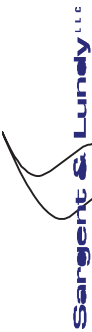
Safety Related X Non-Safety Related

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Te-131m	5.91E+16			
Te-132	6.38E+17			
I-131	2.87E+17			
I-132	6.28E+17			
I-133	4.77E+17			
I-134	1.86E+15			
I-135	2.60E+17			
Xe-133	1.01E+19			
Xe-135	2.04E+18			
Cs-134	8.63E+16			
Cs-136	2.11E+16			
Cs-137	3.29E+16			
Ba-139	1.40E+15			
Ba-140	5.59E+16			
La-140	9.26E+15			
La-141	7.20E+14			
La-142	9.18E+13			
Ce-141	4.37E+15			
Ce-143	3.82E+15			
Ce-144	3.33E+15			
Pr-143	2.53E+15			
Nd-147	1.03E+15			
Np-239	6.84E+16			
Pu-238	2.86E+13			
Pu-239	1.21E+12			
Pu-240	2.75E+12			
Pu-241	4.96E+14			
Am-241	3.20E+11			
Cm-242	1.45E+14			
Cm-244	7.70E+13			

***** BEGINNING OF CHANGE CASE 11 USER INPUT *****

*



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-58 of 1.4-801

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

* SOURCE TERM NUMBER 12 OF 23

```

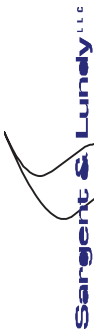
321 RDATNAM2001 'RC401' * SOURCE TITLE
***** RECORD NUMBER 321 REPLACES RECORD NUMBER 211 *****
322 RDOALARM001 8.68E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 322 REPLACES RECORD NUMBER 212 *****
323 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 323 REPLACES RECORD NUMBER 213 *****
324 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 324 REPLACES RECORD NUMBER 214 *****
325 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 325 REPLACES RECORD NUMBER 215 *****
326 RDPLHEAT001 3.73E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 326 REPLACES RECORD NUMBER 216 *****
327 RDPLHITE001 35.7 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 327 REPLACES RECORD NUMBER 217 *****
328 RDPLUDUR001 1.76E+04 * DURATION OF PLUMES
***** RECORD NUMBER 328 REPLACES RECORD NUMBER 218 *****
329 RDPDELAY001 3.20E+04 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
***** RECORD NUMBER 329 REPLACES RECORD NUMBER 219 *****
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
330 RDRELFRC001 8.00E-01 4.60E-03 2.30E-03 3.40E-03 2.70E-03 1.50E-03 8.00E-05 3.40E-04 5.20E-03
***** RECORD NUMBER 330 REPLACES RECORD NUMBER 220 *****
*
***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 11 USER INPUT *****

```

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 11
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-59 of 1.4-801

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

RELEASED INVENTORY OF ALL PLUMES

- Kr-85 6.22E+16
- Kr-85m 2.31E+17
- Kr-87 5.54E+15
- Kr-88 2.40E+17
- Rb-86 4.85E+13
- Sr-89 1.60E+16
- Sr-90 1.69E+15
- Sr-91 9.05E+15
- Sr-92 1.18E+15
- Y-90 2.42E+14
- Y-91 6.10E+14
- Y-92 3.81E+15
- Y-93 3.18E+14
- Zr-95 6.74E+14
- Zr-97 4.52E+14
- Nb-95 6.78E+14
- Mo-99 1.28E+16
- Tc-99m 1.20E+16
- Ru-103 1.33E+16
- Ru-105 1.85E+15
- Ru-106 7.93E+15
- Rh-105 8.76E+15
- Sb-127 2.08E+15
- Sb-129 9.90E+14
- Te-127 2.15E+15
- Te-127m 3.06E+14
- Te-129 1.63E+15
- Te-129m 8.88E+14
- Te-131m 1.98E+15
- Te-132 2.25E+16
- I-131 2.28E+16
- I-132 2.35E+16
- I-133 3.38E+16



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-60 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

- I-134 6.95E+12
- I-135 1.39E+16
- Xe-133 8.04E+18
- Xe-135 1.17E+18
- Cs-134 5.51E+15
- Cs-136 1.34E+15
- Cs-137 2.10E+15
- Ba-139 1.69E+14
- Ba-140 4.73E+16
- La-140 9.10E+15
- La-141 9.66E+13
- La-142 4.26E+12
- Ce-141 2.79E+15
- Ce-143 2.26E+15
- Ce-144 2.14E+15
- Pr-143 7.14E+14
- Nd-147 2.71E+14
- Np-239 4.18E+16
- Pu-238 1.84E+13
- Pu-239 7.74E+11
- Pu-240 1.76E+12
- Pu-241 3.18E+14
- Am-241 8.59E+10
- Cm-242 3.87E+13
- Cm-244 2.05E+13

***** BEGINNING OF CHANGE CASE 12 USER INPUT *****

*

* SOURCE TERM NUMBER 13 OF 23

*

331 RDATNAM2001 'RC402' * SOURCE TITLE
 ***** RECORD NUMBER 331 REPLACES RECORD NUMBER 211 *****



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page	1.4-61	of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

332 RDOALARM001 8.68E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 332 REPLACES RECORD NUMBER 212 *****
333 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 333 REPLACES RECORD NUMBER 213 *****
334 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 334 REPLACES RECORD NUMBER 214 *****
335 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 335 REPLACES RECORD NUMBER 215 *****
336 RDPLHEAT001 3.73E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 336 REPLACES RECORD NUMBER 216 *****
337 RDPLHITE001 35.7 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 337 REPLACES RECORD NUMBER 217 *****
338 RDPLUDUR001 3.60E+4 * DURATION OF PLUMES
***** RECORD NUMBER 338 REPLACES RECORD NUMBER 218 *****
339 RDPDELAY001 3.20E+04 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
***** RECORD NUMBER 339 REPLACES RECORD NUMBER 219 *****
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
340 RDRELFRC001 9.70E-01 2.00E-02 1.00E-02 1.20E-02 3.80E-03 2.10E-03 1.10E-04 4.90E-04 7.30E-03
***** RECORD NUMBER 340 REPLACES RECORD NUMBER 220 *****

```

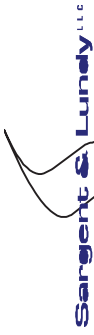
***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 12 USER INPUT *****

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 12
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0

```

RELEASED INVENTORY OF ALL PLUMES
Kr-85 7.54E+16
Kr-85m 1.88E+17
Kr-87 1.67E+15



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-62 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

Kr-88	1.56E+17								
Rb-86	2.10E+14								
Sr-89	2.25E+16								
Sr-90	2.38E+15								
Sr-91	1.06E+16								
Sr-92	8.62E+14								
Y-90	3.95E+14								
Y-91	8.45E+14								
Y-92	3.72E+15								
Y-93	3.67E+14								
Zr-95	9.26E+14								
Zr-97	5.60E+14								
Nb-95	9.32E+14								
Mo-99	1.74E+16								
Tc-99m	1.64E+16								
Ru-103	1.86E+16								
Ru-105	1.74E+15								
Ru-106	1.11E+16								
Rh-105	1.18E+16								
Sb-127	7.20E+15								
Sb-129	2.32E+15								
Te-127	7.50E+15								
Te-127m	1.08E+15								
Te-129	4.49E+15								
Te-129m	3.13E+15								
Te-131m	6.57E+15								
Te-132	7.77E+16								
I-131	9.81E+16								
I-132	8.10E+16								
I-133	1.35E+17								
I-134	4.00E+12								
I-135	4.64E+16								
Xe-133	9.62E+18								
Xe-135	1.20E+18								
Cs-134	2.40E+16								



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-63 of 1.4-801

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

- Cs-136 5.78E+15
- Cs-137 9.14E+15
- Ba-139 6.55E+13
- Ba-140 6.60E+16
- La-140 1.51E+16
- La-141 8.47E+13
- La-142 1.86E+12
- Ce-141 4.02E+15
- Ce-143 3.09E+15
- Ce-144 3.08E+15
- Pr-143 9.97E+14
- Nd-147 3.70E+14
- Np-239 5.84E+16
- Pu-238 2.65E+13
- Pu-239 1.12E+12
- Pu-240 2.54E+12
- Pu-241 4.59E+14
- Am-241 1.18E+11
- Cm-242 5.32E+13
- Cm-244 2.82E+13

***** BEGINNING OF CHANGE CASE 13 USER INPUT *****

*

 * SOURCE TERM NUMBER 14 OF 23

 *

341 RDATNAM2001 'RC403' * SOURCE TITLE
 ***** RECORD NUMBER 341 REPLACES RECORD NUMBER 211 *****
 342 RDOALARM001 8.68E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 ***** RECORD NUMBER 342 REPLACES RECORD NUMBER 212 *****
 343 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 ***** RECORD NUMBER 343 REPLACES RECORD NUMBER 213 *****
 344 RDMAXRIS001 1 * RISK-DOMINANT PLUME



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-64	of	1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

```

***** RECORD NUMBER 344 REPLACES RECORD NUMBER 214 *****
345 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 345 REPLACES RECORD NUMBER 215 *****
346 RDPLHEAT001 3.73E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 346 REPLACES RECORD NUMBER 216 *****
347 RDPLHITE001 35.7 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 347 REPLACES RECORD NUMBER 217 *****
348 RDPLUDUR001 1.76E+04 * DURATION OF PLUMES
***** RECORD NUMBER 348 REPLACES RECORD NUMBER 218 *****
349 RDPDELAY001 3.20E+04 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
***** RECORD NUMBER 349 REPLACES RECORD NUMBER 219 *****
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
350 RDRELFRC001 8.00E-01 4.60E-03 2.30E-03 3.40E-03 2.70E-03 1.50E-03 8.00E-05 3.40E-04 5.20E-03
***** RECORD NUMBER 350 REPLACES RECORD NUMBER 220 *****

```

```

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 13 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 13
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0
*****

```

RELEASED INVENTORY OF ALL PLUMES

```

Kr-85 6.22E+16
Kr-85m 2.31E+17
Kr-87 5.54E+15
Kr-88 2.40E+17
Rb-86 4.85E+13
Sr-89 1.60E+16
Sr-90 1.69E+15
Sr-91 9.05E+15

```



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

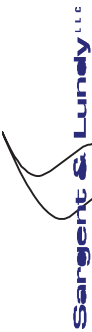
Rev. 2 Date

Safety Related Non-Safety Related

Page 1.4-65 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Sr-92	1.18E+15
Y-90	2.42E+14
Y-91	6.10E+14
Y-92	3.81E+15
Y-93	3.18E+14
Zr-95	6.74E+14
Zr-97	4.52E+14
Nb-95	6.78E+14
Mo-99	1.28E+16
Tc-99m	1.20E+16
Ru-103	1.33E+16
Ru-105	1.85E+15
Ru-106	7.93E+15
Rh-105	8.76E+15
Sb-127	2.08E+15
Sb-129	9.90E+14
Te-127	2.15E+15
Te-127m	3.06E+14
Te-129	1.63E+15
Te-129m	8.88E+14
Te-131m	1.98E+15
Te-132	2.25E+16
I-131	2.28E+16
I-132	2.35E+16
I-133	3.38E+16
I-134	6.95E+12
I-135	1.39E+16
Xe-133	8.04E+18
Xe-135	1.17E+18
Cs-134	5.51E+15
Cs-136	1.34E+15
Cs-137	2.10E+15
Ba-139	1.69E+14
Ba-140	4.73E+16
La-140	9.10E+15



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-66 of 1.4-801

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

- Ia-141 9.66E+13
- Ia-142 4.26E+12
- Ce-141 2.79E+15
- Ce-143 2.26E+15
- Ce-144 2.14E+15
- Pr-143 7.14E+14
- Nd-147 2.71E+14
- Np-239 4.18E+16
- Pu-238 1.84E+13
- Pu-239 7.74E+11
- Pu-240 1.76E+12
- Pu-241 3.18E+14
- Am-241 8.59E+10
- Cm-242 3.87E+13
- Cm-244 2.05E+13

***** BEGINNING OF CHANGE CASE 14 USER INPUT *****

***** SOURCE TERM NUMBER 15 OF 23 *****

***** SOURCE TERM NUMBER 15 OF 23 *****

```

351 RDATNAM2001 'RC404' * SOURCE TITLE
***** RECORD NUMBER 351 REPLACES RECORD NUMBER 211 *****
352 RDOALARM001 8.68E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 352 REPLACES RECORD NUMBER 212 *****
353 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 353 REPLACES RECORD NUMBER 213 *****
354 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 354 REPLACES RECORD NUMBER 214 *****
355 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 355 REPLACES RECORD NUMBER 215 *****
356 RDPLHEAT001 3.73E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 356 REPLACES RECORD NUMBER 216 *****

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page	1.4-67	of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

```

357 RDPLHITE001 35.7 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 357 REPLACES RECORD NUMBER 217 *****
358 RDPLUDUR001 3.60E+4 * DURATION OF PLUMES
***** RECORD NUMBER 358 REPLACES RECORD NUMBER 218 *****
359 RDPDELAY001 3.20E+04 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
***** RECORD NUMBER 359 REPLACES RECORD NUMBER 219 *****
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
360 RDRELFRC001 9.70E-01 2.00E-02 1.00E-02 1.20E-02 3.80E-03 2.10E-03 1.10E-04 4.90E-04 7.30E-03
***** RECORD NUMBER 360 REPLACES RECORD NUMBER 220 *****

```

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 14 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 14

NUMBER OF RECORDS CHANGED = 10

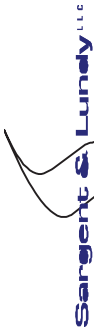
NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

```

Kr-85 7.54E+16
Kr-85m 1.88E+17
Kr-87 1.67E+15
Kr-88 1.56E+17
Rb-86 2.10E+14
Sr-89 2.25E+16
Sr-90 2.38E+15
Sr-91 1.06E+16
Sr-92 8.62E+14
Y-90 3.95E+14
Y-91 8.45E+14
Y-92 3.72E+15
Y-93 3.67E+14

```



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page 1.4-68 of 1.4-801

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

Zr-95	9.26E+14
Zr-97	5.60E+14
Nb-95	9.32E+14
Mo-99	1.74E+16
TC-99m	1.64E+16
Ru-103	1.86E+16
Ru-105	1.74E+15
Ru-106	1.11E+16
Rh-105	1.18E+16
Sb-127	7.20E+15
Sb-129	2.32E+15
Te-127	7.50E+15
Te-127m	1.08E+15
Te-129	4.49E+15
Te-129m	3.13E+15
Te-131m	6.57E+15
Te-132	7.77E+16
I-131	9.81E+16
I-132	8.10E+16
I-133	1.35E+17
I-134	4.00E+12
I-135	4.64E+16
Xe-133	9.62E+18
Xe-135	1.20E+18
Cs-134	2.40E+16
Cs-136	5.78E+15
Cs-137	9.14E+15
Ba-139	6.55E+13
Ba-140	6.60E+16
La-140	1.51E+16
La-141	8.47E+13
La-142	1.86E+12
Ce-141	4.02E+15
Ce-143	3.09E+15
Ce-144	3.08E+15



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-69 of 1.4-801

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

- Pr-143 9.97E+14
- Nd-147 3.70E+14
- Np-239 5.84E+16
- Pu-238 2.65E+13
- Pu-239 1.12E+12
- Pu-240 2.54E+12
- Pu-241 4.59E+14
- Am-241 1.18E+11
- Cm-242 5.32E+13
- Cm-244 2.82E+13

***** BEGINNING OF CHANGE CASE 15 USER INPUT *****

* *****

* SOURCE TERM NUMBER 16 OF 23

* *****

```

361 RDATNAM2001 'RC501' * SOURCE TITLE
***** RECORD NUMBER 361 REPLACES RECORD NUMBER 211 *****
362 RDOALARM001 8.676E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 362 REPLACES RECORD NUMBER 212 *****
363 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 363 REPLACES RECORD NUMBER 213 *****
364 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 364 REPLACES RECORD NUMBER 214 *****
365 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 365 REPLACES RECORD NUMBER 215 *****
366 RDPLHEAT001 5.03E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 366 REPLACES RECORD NUMBER 216 *****
367 RDPLHITE001 35.7 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 367 REPLACES RECORD NUMBER 217 *****
368 RDPLDUR001 3.60E+4 * DURATION OF PLUMES
***** RECORD NUMBER 368 REPLACES RECORD NUMBER 218 *****
369 RDPDELAY001 2.16E+05 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.4-70 of 1.4-801
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
Prepared by		Date	
Reviewed by		Date	
Approved by		Date	

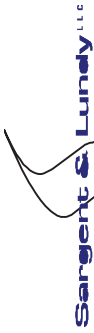
***** RECORD NUMBER 369 REPLACES RECORD NUMBER 219 *****

*
 * Xe/Kr I Cs Te Sr Ru La Ce Ba
 370 RDRELFRC001 9.90E-01 7.70E-04 4.00E-04 1.70E-02 7.40E-06 4.40E-05 2.20E-07 7.00E-07 2.40E-05
 ***** RECORD NUMBER 370 REPLACES RECORD NUMBER 220 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 15 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 15
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

- RELEASED INVENTORY OF ALL PLUMES
- Kr-85 7.69E+16
 - Kr-85m 7.07E+13
 - Kr-87 1.36E+03
 - Kr-88 6.09E+11
 - Rb-86 7.76E+12
 - Sr-89 4.25E+13
 - Sr-90 4.63E+12
 - Sr-91 4.94E+11
 - Sr-92 3.53E+06
 - Y-90 2.41E+12
 - Y-91 1.70E+12
 - Y-92 5.62E+08
 - Y-93 2.20E+10
 - Zr-95 1.81E+12
 - Zr-97 1.38E+11
 - Nb-95 1.86E+12
 - Mo-99 2.13E+14
 - Tc-99m 2.05E+14



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-71 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

Ru-103	3.76E+14
Ru-105	1.25E+10
Ru-106	2.32E+14
Rh-105	9.25E+13
Sb-127	6.95E+15
Sb-129	9.02E+11
Te-127	7.86E+15
Te-127m	1.53E+15
Te-129	2.77E+15
Te-129m	4.25E+15
Te-131m	2.86E+15
Te-132	7.00E+16
I-131	4.18E+15
I-132	7.21E+16
I-133	9.47E+14
I-135	8.40E+12
Xe-133	7.40E+18
Xe-135	2.40E+16
Cs-134	9.57E+14
Cs-136	2.06E+14
Cs-137	3.65E+14
Ba-139	1.48E+00
Ba-140	1.93E+14
La-140	1.39E+14
La-141	2.06E+07
La-142	3.89E-01
Ce-141	5.49E+12
Ce-143	1.51E+12
Ce-144	4.37E+12
Pr-143	2.01E+12
Nd-147	6.48E+11
Np-239	4.46E+13
Pu-238	3.78E+10
Pu-239	1.60E+09
Pu-240	3.63E+09



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-72 of 1.4-801

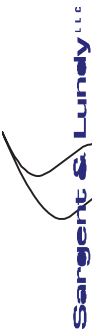
Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

Pu-241 6.55E+11
 Am-241 2.42E+08
 Cm-242 1.05E+11
 Cm-244 5.65E+10

***** BEGINNING OF CHANGE CASE 16 USER INPUT *****
 *

 * SOURCE TERM NUMBER 17 OF 23

371 RDATNAM2001 'RC502' * SOURCE TITLE
 ***** RECORD NUMBER 371 REPLACES RECORD NUMBER 211 *****
 372 RDOALARM001 8.68E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 ***** RECORD NUMBER 372 REPLACES RECORD NUMBER 212 *****
 373 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 ***** RECORD NUMBER 373 REPLACES RECORD NUMBER 213 *****
 374 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 ***** RECORD NUMBER 374 REPLACES RECORD NUMBER 214 *****
 375 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 ***** RECORD NUMBER 375 REPLACES RECORD NUMBER 215 *****
 376 RDPLHEAT001 5.03E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 ***** RECORD NUMBER 376 REPLACES RECORD NUMBER 216 *****
 377 RDPLHITE001 35.7 * RELEASE HEIGHT OF EACH PLUME (METERS)
 ***** RECORD NUMBER 377 REPLACES RECORD NUMBER 217 *****
 378 RDPLUDUR001 3.60E+4 * DURATION OF PLUMES
 ***** RECORD NUMBER 378 REPLACES RECORD NUMBER 218 *****
 379 RDPDELAY001 2.16E+05 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
 ***** RECORD NUMBER 379 REPLACES RECORD NUMBER 219 *****
 *
 * Xe/Kr I Cs Te Sr Ru La Ce Ba
 380 RDRELFRC001 9.90E-01 7.70E-04 4.00E-04 1.70E-02 7.40E-06 4.40E-05 2.20E-07 7.00E-07 2.40E-05
 ***** RECORD NUMBER 380 REPLACES RECORD NUMBER 220 *****



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 16 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 16
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

Kr-85 7.69E+16
 Kr-85m 7.07E+13
 Kr-87 1.36E+03
 Kr-88 6.09E+11
 Rb-86 7.76E+12
 Sr-89 4.25E+13
 Sr-90 4.63E+12
 Sr-91 4.94E+11
 Sr-92 3.53E+06
 Y-90 2.41E+12
 Y-91 1.70E+12
 Y-92 5.62E+08
 Y-93 2.20E+10
 Zr-95 1.81E+12
 Zr-97 1.38E+11
 Nb-95 1.86E+12
 Mo-99 2.13E+14
 Tc-99m 2.05E+14
 Ru-103 3.76E+14
 Ru-105 1.25E+10
 Ru-106 2.32E+14
 Rh-105 9.25E+13
 Sb-127 6.95E+15
 Sb-129 9.02E+11



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related Non-Safety Related

Page 1.4-74 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Te-127	7.86E+15
Te-127m	1.53E+15
Te-129	2.77E+15
Te-129m	4.25E+15
Te-131m	2.86E+15
Te-132	7.00E+16
I-131	4.18E+15
I-132	7.21E+16
I-133	9.47E+14
I-135	8.40E+12
Xe-133	7.40E+18
Xe-135	2.40E+16
Cs-134	9.57E+14
Cs-136	2.06E+14
Cs-137	3.65E+14
Ba-139	1.48E+00
Ba-140	1.93E+14
La-140	1.39E+14
La-141	2.06E+07
La-142	3.89E-01
Ce-141	5.49E+12
Ce-143	1.51E+12
Ce-144	4.37E+12
Pr-143	2.01E+12
Nd-147	6.48E+11
Np-239	4.46E+13
Pu-238	3.78E+10
Pu-239	1.60E+09
Pu-240	3.63E+09
Pu-241	6.55E+11
Am-241	2.42E+08
Cm-242	1.05E+11
Cm-244	5.65E+10



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-75 of 1.4-801

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

```

***** BEGINNING OF CHANGE CASE 17 USER INPUT *****
*
* SOURCE TERM NUMBER 18 OF 23
*
*
*
381 RDATNAM2001 'RC503' * SOURCE TITLE
***** RECORD NUMBER 381 REPLACES RECORD NUMBER 211 *****
382 RDOALARM001 8.676E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 382 REPLACES RECORD NUMBER 212 *****
383 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 383 REPLACES RECORD NUMBER 213 *****
384 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 384 REPLACES RECORD NUMBER 214 *****
385 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 385 REPLACES RECORD NUMBER 215 *****
386 RDPHEAT001 3.20E+09 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 386 REPLACES RECORD NUMBER 216 *****
387 RDPWHITE001 35.7 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 387 REPLACES RECORD NUMBER 217 *****
388 RDPLUDUR001 3.60E+4 * DURATION OF PLUMES
***** RECORD NUMBER 388 REPLACES RECORD NUMBER 218 *****
389 RDPDELAY001 3.02E+05 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
***** RECORD NUMBER 389 REPLACES RECORD NUMBER 219 *****
*
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
390 RDRELFRC001 1.00E+00 4.10E-04 6.90E-05 5.10E-05 8.50E-06 4.40E-05 2.80E-07 7.30E-07 2.40E-05
***** RECORD NUMBER 390 REPLACES RECORD NUMBER 220 *****
*
***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 17 USER INPUT *****

```

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 17
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-76 of 1.4-801

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

RELEASED INVENTORY OF ALL PLUMES

Kr-85	7.77E+16
Kr-85m	1.77E+12
Kr-87	3.03E-03
Kr-88	1.81E+09
Rb-86	1.29E+12
Sr-89	4.81E+13
Sr-90	5.31E+12
Sr-91	9.93E+10
Sr-92	9.00E+03
Y-90	3.36E+12
Y-91	2.12E+12
Y-92	6.10E+06
Y-93	5.44E+09
Zr-95	2.28E+12
Zr-97	6.57E+10
Nb-95	2.37E+12
Mo-99	1.66E+14
Tc-99m	1.60E+14
Ru-103	3.69E+14
Ru-105	3.00E+08
Ru-106	2.31E+14
Rh-105	5.79E+13
Sb-127	1.74E+13
Sb-129	5.85E+07
Te-127	2.05E+13
Te-127m	4.58E+12
Te-129	8.12E+12
Te-129m	1.25E+13
Te-131m	4.94E+12
Te-132	1.70E+14



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-77 of 1.4-801

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

- I-131 1.54E+15
- I-132 1.75E+14
- I-133 2.27E+14
- I-135 3.65E+11
- Xe-133 6.55E+18
- Xe-135 3.91E+15
- Cs-134 1.65E+14
- Cs-136 3.38E+13
- Cs-137 6.30E+13
- Ba-140 1.83E+14
- La-140 1.55E+14
- La-141 3.88E+05
- Ce-141 5.60E+12
- Ce-143 9.52E+11
- Ce-144 4.55E+12
- Pr-143 2.41E+12
- Nd-147 7.74E+11
- Np-239 3.47E+13
- Pu-238 3.94E+10
- Pu-239 1.68E+09
- Pu-240 3.78E+09
- Pu-241 6.83E+11
- Am-241 3.09E+08
- Cm-242 1.34E+11
- Cm-244 7.19E+10

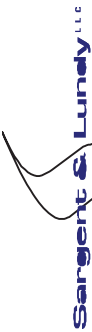
***** BEGINNING OF CHANGE CASE 18 USER INPUT *****

*

* SOURCE TERM NUMBER 19 OF 23

*

391 RDATNAM2001 'RC504' * SOURCE TITLE
 ***** RECORD NUMBER 391 REPLACES RECORD NUMBER 211 *****



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-78 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

392 RDOALARM001 8.68E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 392 REPLACES RECORD NUMBER 212 *****
393 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 393 REPLACES RECORD NUMBER 213 *****
394 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 394 REPLACES RECORD NUMBER 214 *****
395 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 395 REPLACES RECORD NUMBER 215 *****
396 RDPLHEAT001 3.20E+09 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 396 REPLACES RECORD NUMBER 216 *****
397 RDPLHITE001 35.7 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 397 REPLACES RECORD NUMBER 217 *****
398 RDPLUDUR001 3.60E+4 * DURATION OF PLUMES
***** RECORD NUMBER 398 REPLACES RECORD NUMBER 218 *****
399 RDPDELAY001 3.02E+05 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
***** RECORD NUMBER 399 REPLACES RECORD NUMBER 219 *****
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
400 RDRELFRC001 1.00E+00 4.10E-04 6.90E-05 5.10E-05 8.50E-06 4.40E-05 2.80E-07 7.30E-07 2.40E-05
***** RECORD NUMBER 400 REPLACES RECORD NUMBER 220 *****

```

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 18 USER INPUT *****

```

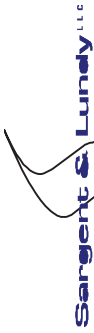
USER INPUT PROCESSING SUMMARY - CHANGE CASE 18
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0

```

```

RELEASED INVENTORY OF ALL PLUMES
Kr-85 7.77E+16
Kr-85m 1.77E+12
Kr-87 3.03E-03

```



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

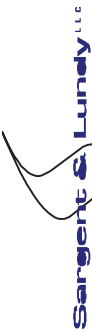
Rev. 2 Date

Safety Related Non-Safety Related

Page 1.4-79 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Kr-88	1.81E+09
Rb-86	1.29E+12
Sr-89	4.81E+13
Sr-90	5.31E+12
Sr-91	9.93E+10
Sr-92	9.00E+03
Y-90	3.36E+12
Y-91	2.12E+12
Y-92	6.10E+06
Y-93	5.44E+09
Zr-95	2.28E+12
Zr-97	6.57E+10
Nb-95	2.37E+12
Mo-99	1.66E+14
Tc-99m	1.60E+14
Ru-103	3.69E+14
Ru-105	3.00E+08
Ru-106	2.31E+14
Rh-105	5.79E+13
Sb-127	1.74E+13
Sb-129	5.85E+07
Te-127	2.05E+13
Te-127m	4.58E+12
Te-129	8.12E+12
Te-129m	1.25E+13
Te-131m	4.94E+12
Te-132	1.70E+14
I-131	1.54E+15
I-132	1.75E+14
I-133	2.27E+14
I-135	3.65E+11
Xe-133	6.55E+18
Xe-135	3.91E+15
Cs-134	1.65E+14
Cs-136	3.38E+13



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-80 of 1.4-801

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

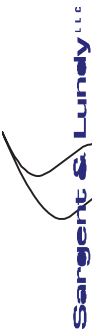
- Cs-137 6.30E+13
- Ba-140 1.83E+14
- La-140 1.55E+14
- La-141 3.88E+05
- Ce-141 5.60E+12
- Ce-143 9.52E+11
- Ce-144 4.55E+12
- Pr-143 2.41E+12
- Nd-147 7.74E+11
- Np-239 3.47E+13
- Pu-238 3.94E+10
- Pu-239 1.68E+09
- Pu-240 3.78E+09
- Pu-241 6.83E+11
- Am-241 3.09E+08
- Cm-242 1.34E+11
- Cm-244 7.19E+10

***** BEGINNING OF CHANGE CASE 19 USER INPUT *****

```

*****
* SOURCE TERM NUMBER 20 OF 23
*****
*
401 RDATNAM2001 'RC602' * SOURCE TITLE
***** RECORD NUMBER 401 REPLACES RECORD NUMBER 211 *****
402 RDOALARM001 8.68E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 402 REPLACES RECORD NUMBER 212 *****
403 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 403 REPLACES RECORD NUMBER 213 *****
404 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 404 REPLACES RECORD NUMBER 214 *****
405 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 405 REPLACES RECORD NUMBER 215 *****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-81 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

406 RDPLHEAT001 5.03E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 ***** RECORD NUMBER 406 REPLACES RECORD NUMBER 216 *****
 407 RDPLHITE001 35.7 * RELEASE HEIGHT OF EACH PLUME (METERS)
 ***** RECORD NUMBER 407 REPLACES RECORD NUMBER 217 *****
 408 RDPLUDUR001 3.60E+4 * DURATION OF PLUMES
 ***** RECORD NUMBER 408 REPLACES RECORD NUMBER 218 *****
 409 RDPDELAY001 2.16E+05 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
 ***** RECORD NUMBER 409 REPLACES RECORD NUMBER 219 *****
 *
 * Xe/Kr I Cs Te Sr Ru La Ce Ba
 410 RDRELFRC001 9.90E-01 7.70E-04 4.00E-04 1.70E-02 7.40E-02 4.40E-06 4.40E-05 2.20E-07 7.00E-07 2.40E-05
 ***** RECORD NUMBER 410 REPLACES RECORD NUMBER 220 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 19 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 19
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

Kr-85 7.69E+16
 Kr-85m 7.07E+13
 Kr-87 1.36E+03
 Kr-88 6.09E+11
 Rb-86 7.76E+12
 Sr-89 4.25E+13
 Sr-90 4.63E+12
 Sr-91 4.94E+11
 Sr-92 3.53E+06
 Y-90 2.41E+12
 Y-91 1.70E+12



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

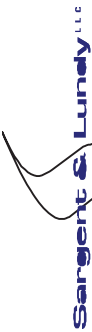
Rev. 2 Date

Safety Related Non-Safety Related

Page 1.4-82 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Y-92	5.62E+08
Y-93	2.20E+10
Zr-95	1.81E+12
Zr-97	1.38E+11
Nb-95	1.86E+12
Mo-99	2.13E+14
Tc-99m	2.05E+14
Ru-103	3.76E+14
Ru-105	1.25E+10
Ru-106	2.32E+14
Rh-105	9.25E+13
Sb-127	6.95E+15
Sb-129	9.02E+11
Te-127	7.86E+15
Te-127m	1.53E+15
Te-129	2.77E+15
Te-129m	4.25E+15
Te-131m	2.86E+15
Te-132	7.00E+16
I-131	4.18E+15
I-132	7.21E+16
I-133	9.47E+14
I-135	8.40E+12
Xe-133	7.40E+18
Xe-135	2.40E+16
Cs-134	9.57E+14
Cs-136	2.06E+14
Cs-137	3.65E+14
Ba-139	1.48E+00
Ba-140	1.93E+14
La-140	1.39E+14
La-141	2.06E+07
La-142	3.89E-01
Ce-141	5.49E+12
Ce-143	1.51E+12



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-83 of 1.4-801

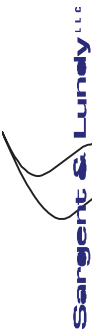
Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

Ce-144 4.37E+12
 Pr-143 2.01E+12
 Nd-147 6.48E+11
 Np-239 4.46E+13
 Pu-238 3.78E+10
 Pu-239 1.60E+09
 Pu-240 3.63E+09
 Pu-241 6.55E+11
 Am-241 2.42E+08
 Cm-242 1.05E+11
 Cm-244 5.65E+10

***** BEGINNING OF CHANGE CASE 20 USER INPUT *****

```

*****
* SOURCE TERM NUMBER 21 OF 23
*****
*
411 RDATNAM2001 'RC701' * SOURCE TITLE
*****
412 RDOALARM001 4.21E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
*****
413 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
*****
414 RDMAXRIS001 1 * RISK-DOMINANT PLUME
*****
415 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
*****
416 RDPLHEAT001 1.36E+07 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
*****
417 RDPLHITE001 24.75 * RELEASE HEIGHT OF EACH PLUME (METERS)
*****
418 RDPLUDUR001 2.41E+04 * DURATION OF PLUMES
*****
  
```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-84 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

419 RDPDELAY001 1.19E+04 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
 ***** RECORD NUMBER 419 REPLACES RECORD NUMBER 219 *****
 *
 * Xe/Kr I Cs Te Sr Ru La Ce Ba
 420 RDRELFRC001 1.10E-01 4.20E-03 4.40E-03 6.90E-03 6.00E-04 4.80E-03 2.20E-05 1.10E-04 2.70E-03
 ***** RECORD NUMBER 420 REPLACES RECORD NUMBER 220 *****
 *
 ***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 20 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 20
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

Kr-85 8.55E+15
 Kr-85m 6.54E+16
 Kr-87 9.77E+15
 Kr-88 1.04E+17
 Rb-86 9.35E+13
 Sr-89 3.56E+15
 Sr-90 3.75E+14
 Sr-91 2.83E+15
 Sr-92 8.66E+14
 Y-90 3.96E+13
 Y-91 1.64E+14
 Y-92 1.43E+15
 Y-93 1.21E+14
 Zr-95 1.86E+14
 Zr-97 1.51E+14
 Nb-95 1.86E+14
 Mo-99 4.29E+16



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related Non-Safety Related

Page 1.4-85 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

Tc-99m	3.95E+16
Ru-103	4.28E+16
Ru-105	1.23E+16
Ru-106	2.54E+16
Rh-105	2.99E+16
Sb-127	4.37E+15
Sb-129	4.26E+15
Te-127	4.46E+15
Te-127m	6.21E+14
Te-129	5.65E+15
Te-129m	1.81E+15
Te-131m	4.47E+15
Te-132	4.77E+16
I-131	2.12E+16
I-132	4.63E+16
I-133	3.61E+16
I-134	2.57E+14
I-135	2.08E+16
Xe-133	1.14E+18
Xe-135	2.37E+17
Cs-134	1.05E+16
Cs-136	2.58E+15
Cs-137	4.02E+15
Ba-139	9.22E+14
Ba-140	2.48E+16
La-140	2.89E+15
La-141	6.07E+13
La-142	9.61E+12
Ce-141	9.07E+14
Ce-143	8.07E+14
Ce-144	6.91E+14
Pr-143	1.94E+14
Nd-147	7.55E+13
Np-239	1.43E+16
Pu-238	5.94E+12



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-86 of 1.4-801

Safety Related X Non-Safety Related

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

Pu-239 2.50E+11
 Pu-240 5.70E+11
 Pu-241 1.03E+14
 Am-241 2.36E+10
 Cm-242 1.07E+13
 Cm-244 5.65E+12

***** BEGINNING OF CHANGE CASE 21 USER INPUT *****

***** SOURCE TERM NUMBER 22 OF 23 *****

***** SOURCE TERM NUMBER 22 OF 23 *****

```

421 RDATNAM2001 'RC702' * SOURCE TITLE
***** RECORD NUMBER 421 REPLACES RECORD NUMBER 211 *****
422 RDOALARM001 4.21E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 422 REPLACES RECORD NUMBER 212 *****
423 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 423 REPLACES RECORD NUMBER 213 *****
424 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 424 REPLACES RECORD NUMBER 214 *****
425 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 425 REPLACES RECORD NUMBER 215 *****
426 RDPLHEAT001 1.36E+07 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 426 REPLACES RECORD NUMBER 216 *****
427 RDPLHITE001 24.75 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 427 REPLACES RECORD NUMBER 217 *****
428 RDPLUDUR001 2.41E+04 * DURATION OF PLUMES
***** RECORD NUMBER 428 REPLACES RECORD NUMBER 218 *****
429 RDPDELAY001 1.19E+04 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
***** RECORD NUMBER 429 REPLACES RECORD NUMBER 219 *****

```

 * Xe/Kr I Cs Te Sr Ru La Ce Ba
 430 RDRELFRC001 1.10E-01 8.40E-02 8.70E-02 1.40E-01 1.20E-02 9.60E-02 4.50E-04 2.20E-03 5.40E-02



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.4-87 of 1.4-801
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

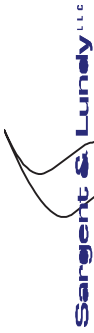
***** RECORD NUMBER 430 REPLACES RECORD NUMBER 220 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 21 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 21
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

Kr-85 8.55E+15
 Kr-85m 6.54E+16
 Kr-87 9.77E+15
 Kr-88 1.04E+17
 Rb-86 1.85E+15
 Sr-89 7.12E+16
 Sr-90 7.50E+15
 Sr-91 5.66E+16
 Sr-92 1.73E+16
 Y-90 7.99E+14
 Y-91 3.35E+15
 Y-92 2.87E+16
 Y-93 2.47E+15
 Zr-95 3.80E+15
 Zr-97 3.08E+15
 Nb-95 3.81E+15
 Mo-99 8.58E+17
 TC-99m 7.90E+17
 Ru-103 8.55E+17
 Ru-105 2.46E+17
 Ru-106 5.08E+17
 Rh-105 5.98E+17



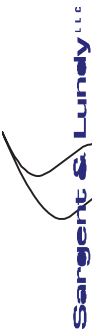
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-88 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

Sb-127	8.87E+16
Sb-129	8.64E+16
Te-127	9.05E+16
Te-127m	1.26E+16
Te-129	1.15E+17
Te-129m	3.67E+16
Te-131m	9.06E+16
Te-132	9.67E+17
I-131	4.24E+17
I-132	9.38E+17
I-133	7.22E+17
I-134	5.13E+15
I-135	4.16E+17
Xe-133	1.16E+18
Xe-135	4.24E+17
Cs-134	2.09E+17
Cs-136	5.11E+16
Cs-137	7.95E+16
Ba-139	1.84E+16
Ba-140	4.96E+17
La-140	5.78E+16
La-141	1.24E+15
La-142	1.97E+14
Ce-141	1.81E+16
Ce-143	1.61E+16
Ce-144	1.38E+16
Pr-143	3.95E+15
Nd-147	1.54E+15
Np-239	2.87E+17
Pu-238	1.19E+14
Pu-239	5.00E+12
Pu-240	1.14E+13
Pu-241	2.06E+15
Am-241	4.82E+11
Cm-242	2.18E+14



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page	1.4-89	of 1.4-801

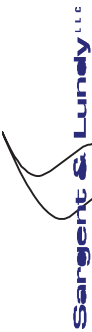
Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

Cm-244 1.16E+14

```

***** BEGINNING OF CHANGE CASE 22 USER INPUT *****
*
***** SOURCE TERM NUMBER 23 OF 23 *****
*
431 RDATNAM2001 'RC802' * SOURCE TITLE
***** RECORD NUMBER 431 REPLACES RECORD NUMBER 211 *****
432 RDOALARM001 2.42E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 432 REPLACES RECORD NUMBER 212 *****
433 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 433 REPLACES RECORD NUMBER 213 *****
434 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 434 REPLACES RECORD NUMBER 214 *****
435 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 435 REPLACES RECORD NUMBER 215 *****
436 RDPLHEAT001 2.36E+08 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 436 REPLACES RECORD NUMBER 216 *****
437 RDPLHITE001 30.6 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 437 REPLACES RECORD NUMBER 217 *****
438 RDPLDUR001 2.02E+04 * DURATION OF PLUMES
***** RECORD NUMBER 438 REPLACES RECORD NUMBER 218 *****
439 RDPDELAY001 2.84E+04 * TIME OF RELEASE FOR EACH PLUME (SECONDS FROM SCRAM)
***** RECORD NUMBER 439 REPLACES RECORD NUMBER 219 *****
*
* Xe/Kr I Cs Te Sr Ru La Ce Ba
440 RDRELFRC001 9.80E-01 7.10E-01 6.90E-01 6.40E-01 1.30E-01 5.70E-01 3.90E-03 2.20E-02 3.80E-01
***** RECORD NUMBER 440 REPLACES RECORD NUMBER 220 *****
*
***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 22 USER INPUT *****

```

Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

- Kr-85 7.62E+16
- Kr-85m 3.12E+17
- Kr-87 9.62E+15
- Kr-88 3.44E+17
- Rb-86 1.46E+16
- Sr-89 7.70E+17
- Sr-90 8.13E+16
- Sr-91 4.56E+17
- Sr-92 6.68E+16
- Y-90 1.12E+16
- Y-91 2.97E+16
- Y-92 2.00E+17
- Y-93 1.62E+16
- Zr-95 3.29E+16
- Zr-97 2.26E+16
- Nb-95 3.30E+16
- Mo-99 4.88E+18
- Tc-99m 4.57E+18
- Ru-103 5.06E+18
- Ru-105 7.78E+17
- Ru-106 3.01E+18
- Rh-105 3.36E+18
- Sb-127 3.93E+17
- Sb-129 2.06E+17
- Te-127 4.06E+17
- Te-127m 5.76E+16
- Te-129 3.27E+17



Calcs. For ENVIRONMENTAL CONSEQUENCE

ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev. 2 Date

Page 1.4-91 of 1.4-801

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

Te-129m	1.67E+17
Te-131m	3.77E+17
Te-132	4.26E+18
I-131	3.53E+18
I-132	4.41E+18
I-133	5.33E+18
I-134	1.78E+15
I-135	2.30E+18
Xe-133	1.02E+19
Xe-135	3.34E+18
Cs-134	1.65E+18
Cs-136	4.01E+17
Cs-137	6.31E+17
Ba-139	1.70E+16
Ba-140	3.46E+18
La-140	6.19E+17
La-141	5.27E+15
La-142	2.77E+14
Ce-141	1.81E+17
Ce-143	1.48E+17
Ce-144	1.38E+17
Pr-143	3.56E+16
Nd-147	1.32E+16
Np-239	2.73E+18
Pu-238	1.19E+15
Pu-239	5.01E+13
Pu-240	1.14E+14
Pu-241	2.06E+16
Am-241	4.20E+12
Cm-242	1.89E+15
Cm-244	1.00E+15

USER INPUT IS READ FROM UNIT 25
 RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.



Calcs. For **ENVIRONMENTAL CONSEQUENCE**
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-92 of 1.4-801

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
 THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

RECORD
 NUMBER RECORD

```

*****
* FILE NAME: E.2.INP
*
* Sargent & Lundy (10/2009)
*
* DOSE CONVERSION FILE DATA
*****
* DOSE CONVERSION FACTOR FILENAME
  1 DCF_FILE001 'C:\MACCS2\DOSDATA.INP'
*
* MISCELLANEOUS DATA
*****
2 DESCRIPTIVE TITLE DESCRIBING THIS "EARLY" INPUT FILE
*
3 MIEANAM1001 'GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS'
*
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
* FALSE ASSIGNED BECAUSE CHRONC IS TO BE RUN AFTER EARLY
*
4 MIENDAT2001 .FALSE.
*
* DISPERSION MODEL OPTION CODE:
* USER'S GUIDE APPENDIC C/NUREG 4551 APPENDIX A
* 1 * STRAIGHT LINE
* 2 * WIND-SHIFT WITH ROTATION

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.4-93 of 1.4-801
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*
5 MIIPLUME001 2
*
* NUMBER OF FINE GRID SUBDIVISIONS USED BY THE MODEL
* 3, 5 OR 7 ALLOWED
*
6 MINUMFIN001 7
*
* LEVEL OF DEBUG OUTPUT REQUIRED, NORMAL RUNS SHOULD SPECIFY ZERO (MINIMUM DEBUG OUTPUT)
*
7 MIIPRINT001 0
*
* LOGICAL FLAG SIGNIFYING THAT THE RISK CONTRIBUTION TABLES ARE NOT TO BE PRINTED
*
* RISBIN
*
8 MIRISCAT001 .FALSE.
*
* FLAG INDICATING WIND-ROSES FROM ATMOS ARE TO USED
*
9 MIOVRRID001 .FALSE.
*
*****
* ORGAN DEFINITION (OD) DATA
*****
*
* ORGANS TO BE USED FOR HEALTH EFFECTS
*
* ORGNAM ORGFLG
*
10 MIORGDEF001 'A-SKIN' .TRUE.
11 MIORGDEF002 'A-RED MARR' .TRUE.
12 MIORGDEF003 'A-LUNGS' .TRUE.
13 MIORGDEF004 'A-THYROIDH' .TRUE.
14 MIORGDEF005 'A-STOMACH' .TRUE.
15 MIORGDEF006 'A-LOWER LI' .TRUE.

```



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-94 of 1.4-801

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

16 MIORGDEF007 'L-EDEWBODY' .TRUE.
 17 MIORGDEF008 'L-RED MARR' .TRUE.
 18 MIORGDEF009 'L-BONE SUR' .TRUE.
 19 MIORGDEF010 'L-BREAST' .TRUE.
 20 MIORGDEF011 'L-LUNGS' .TRUE.
 21 MIORGDEF012 'L-THYROID' .TRUE.
 22 MIORGDEF013 'L-LOWER LI' .TRUE.
 23 MIORGDEF014 'L-BLAD WAL' .TRUE.
 24 MIORGDEF015 'L-LIVER' .TRUE.
 25 MIORGDEF016 'L-THYROIDH' .TRUE.

* *****

* POPULATION DISTRIBUTION (PD) DATA

* *****

* FLAG INDICATES THAT THE POPULATION DATA IS PROVIDED IN A SEPARATE FILE

26 PDPOFLG001 FILE

* *****

* SHIELDING AND EXPOSURE (SE) DATA

* *****

* THREE VALUES OF EACH PROTECTION FACTOR ARE SUPPLIED,
* ONE FOR EACH TYPE OF ACTIVITY:

* ACTIVITY TYPE:

- * 1 - EVACUEES WHILE MOVING
- * 2 - NORMAL ACTIVITY IN SHELTERING AND EVACUATION ZONE
- * 3 - SHELTERED ACTIVITY

* CLOUD SHIELDING FACTORS

* EVACUEES NORMAL SHELTER
 1. 0.75 0.6

27 SECSFACT001



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-95 of 1.4-801

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

```

* * PROTECTION FACTORS FOR INHALATION
* *
* * EVACUEES NORMAL SHELTER
28 SEPROTIN001 1. 0.41 0.33
* *
* * BREATHING RATES (CUBIC METERS PER SECOND)
* *
* * EVACUEES NORMAL SHELTER
29 SEBRRATE001 2.66E-4 2.66E-4 2.66E-4
* *
* * SKIN PROTECTION FACTORS
* *
* * EVACUEES NORMAL SHELTER
30 SESKPFAC001 1.0 0.41 0.33
* *
* * GROUND SHIELDING FACTORS
* *
* * EVACUEES NORMAL SHELTER
31 SEGSHFAC001 0.5 0.33 0.2
* *
* * RESUSPENSION INHALATION MODEL CONCENTRATION COEFFICIENT (SEC/METER)
* *
32 SERESCON001 1.E-4
* *
* * RESUSPENSION CONCENTRATION COEFFICIENT HALF-LIFE (SEC)
* *
33 SERESHAF001 1.82E5
* *
* * EVACUATION ZONE DATA BLOCK
* *
* * SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
* *

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No.	2009-11222		
Rev.	2	Date	
Page	1.4-96	of	1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

34 EZEANAM2001 '95% EVACUATION'
 *
 * THE TYPE OF WEIGHTING TO BE APPLIED TO THE EMERGENCY RESPONSE SCENARIOS
 * (A VALUE OF 'TIME' OR 'PEOPLE')
 *

35 EZWTNAME001 'PEOPLE'
 *
 * WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO
 * 95% OF PEOPLE EVACUATED
 *

36 EZWTFRAC001 0.95
 *
 * LAST RING IN THE MOVEMENT ZONE
 * (RING 6 CORRESPONDS TO 60 MILES - NO EXPOSURE AFTER TRAVELING TO 10 MILES)
 *

37 EZLASM0V001 6
 *
 * FLAG DEFINING THE TIME AT WHICH EVACUEES "ENTER" THE DESTINATION ELEMENT
 *

38 TRAVELPOINT 'BOUNDARY'
 *
 * RADIAL EVACUATION SPEED (M/S), SPEED TO EXIT EPZ ONCE TRAVEL BEGINS
 * 95 MIN TRAVEL TIME TO CLEAR EPZ (10 MILES)
 *

39 EZESPEED001 2.8 2.8 2.8
 *
 * EVACUATION IS BASED ON A RADIAL EVACUATION
 *

40 EZEVAATYP001 'RADIAL'
 *
 *THE DURATION (SECONDS) OF THE EARLY PHASE OF EVACUATION (1440 HOURS)
 *

41 EZDURBEG001 86400.0
 *
 *THE DURATION (SECONDS) OF THE MIDDLE PHASE OF EVACUATION



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*
42 EZDURMID001 0.0
*
* CONTROL FLAG INDICATING THAT THE INITIATION OF SHELTERING AND
* EVACUATION ACTIONS WILL OCCUR AT THE OFF-SITE ALARM TIME (ATMOS INPUT VARIABLE)
*
43 EZREFPNT001 'ALARM'
*
* THE NUMBER OF CONCENTRIC RINGS IN WHICH EVACUATION AND/OR SHELTERING CAN OCCUR FOR
* THE RESIDENT POPULATION
*
44 EZNUMEVA001 6
*
* FOR EACH DISTANCE RING IN THE SHELTER/EVACUATION REGION - THE DELAY TO TAKE SHELTER
* (SECONDS) FOR RESIDENT INDIVIDUALS (65 MIN DELAY)
*
45 EZDLTSHL001 3900. 3900. 3900. 3900. 3900.
*
*DELAY FROM SHELTER TO EVAC
*
46 EZDLTEVA001 0. 0. 0. 0. 0.
*
*****
* SHELTER AND RELOCATION (SR) ZONE DATA
*****
*
* DURATION OF THE EMERGENCY PHASE (SECONDS FROM PLUME ARRIVAL)
* (ONE WEEK)
*
47 SRENDEMP001 604800.
*
* CRITICAL ORGAN FOR RELOCATION DECISIONS
* NUREGR 4551, APPENDIX A and HC ER
* EDEWBODY - EFFECTIVE WHOLE-BODY DOSE EQUIVALENT
*

```




Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.4-98 of 1.4-801
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

48 SRCRIORG001 'L-EDEWBODY'
*
* HOT SPOT RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
* ONE-HALF DAY, NUREGR 4551, APPENDIX A
*
49 SRTIMHOT001 43200.
*
* NORMAL RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
* ONE DAY, NUREGR 4551, APPENDIX A and HC ER
*
50 SRTIMNRM001 86400.
*
* HOT SPOT RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
* (1 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)
* HC ER
*
51 SRDOSHOT001 0.01
*
* NORMAL RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
* (1 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)
* HC ER
*
52 SRDOSNRM001 0.01
*
*****
* EARLY FATALITY (DF) DATA
*****
*
* NUMBER OF EARLY FATALITY EFFECTS
* HC ER
*
53 EFNUMEFA001 3
*
* ORGNAM EFFACA EFFACB EFFTHR
*

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2 Date

Page 1.4-99 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

		Safety Related	X	Non-Safety Related					
54	EFATAGRP001	'A-RED MARR'		3.8	5.0	1.5			
55	EFATAGRP002	'A-LUNGS'		10.0	7.0	5.0			
56	EFATAGRP003	'A-LOWER LI'		15.0	10.0	8.0			

* EARLY INJURY MODEL PARAMETERS									

* NUMBER OF EARLY INJURY EFFECTS									

57	EINUMEIN001	0							

* LATENT CANCER (LC) PARAMETERS									

* NUMBER OF LATENT CANCER EFFECTS									

58	LCNUMACA001	7							

* THRESHOLD DOSE FOR APPLYING THE DOSE DEPENDENT REDUCTION FACTOR									

59	LCDDTHRE001	0.2		(20 REM, BELOW WHICH DDREFA WILL BE APPLIED)					

* DOSE THRESHOLD FOR LINEAR DOSE RESPONSE (SV)									
* LINEAR MODEL (QUADRATIC MODEL IS NOT BEING USED)									

60	LCACTHRE001	0.0							

* ACNAME ORGNAM ACSUSC DOSEFA DOSEFB CFRISK CIRISK DDREFA									

61	LCANCERS001	'LEUKEMIA'		1.0	1.0	0.0	9.70E-3	0.0	2.0
62	LCANCERS002	'BONE'		1.0	1.0	0.0	1.20E-4	0.0	2.0
63	LCANCERS003	'BREAST'		1.0	1.0	0.0	5.40E-3	1.7E-2	1.0
64	LCANCERS004	'LUNG'		1.0	1.0	0.0	1.55E-2	0.0	2.0



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-100 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

65 LCANCERS005 'THYROID' 'L-THYROIDH' 1.0 1.0 0.0 0.0 7.20E-4 7.2E-3 1.0
 66 LCANCERS006 'GI' 'L-LOWER LI' 1.0 1.0 0.0 0.0 3.36E-2 0.0 2.0
 67 LCANCERS007 'OTHER' 'L-EDEWBODY' 1.0 1.0 0.0 0.0 2.76E-2 0.0 2.0

*
 * RESULT 1 - TOTAL NUMBER OF A GIVEN EFFECT (LATENT CANCER, EARLY DEATH)

* NUMBER OF DESIRED RESULTS OF THIS TYPE
 *
 68 TYPE1NUMBER 5

NAME	I1DIS1	I2DIS1
TYPE1OUT001 'CAN FAT/TOTAL'	1	10 * 0 to 50 miles
TYPE1OUT002 'CAN FAT/TOTAL'	1	6 * 0 to 10 miles
TYPE1OUT003 'ERL FAT/TOTAL'	1	10 * 0 to 50 miles
TYPE1OUT004 'ERL FAT/TOTAL'	1	2 * 0 to 2 miles
TYPE1OUT005 'ERL FAT/TOTAL'	1	1 * 0 to 1 miles

*
 * RESULT 2 - FURTHEST DISTANCE AT WHICH A GIVEN RISK OF EARLY DEATH IS EXCEEDED

* NUMBER OF DESIRED RESULTS OF THIS TYPE
 *
 74 TYPE2NUMBER 0

*
 * RESULT 3 - POPULATION EXCEEDING A DOSE THRESHOLD

* NUMBER OF DESIRED RESULTS OF THIS TYPE
 *
 75 TYPE3NUMBER 2



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-101 of 1.4-801

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date

```

*
76 TYPE3OUT001 'L-EDEWBODY' 2.0 * 2 SV = 200 rem
77 TYPE3OUT002 'L-EDEWBODY' 0.25 * 0.25 SV = 25 rem
*
* *****
* RESULT 4 - AVERAGE INDIVIDUAL RISK
* *****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
78 TYPE4NUMBER 0
*
* *****
* RESULT 5 - POPULATION DOSE
* *****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
79 TYPE5NUMBER 2
*
* NAME I1DIS5 I2DIS5
*
80 TYPE5OUT001 'L-EDEWBODY' 1 6 * 0 to 10 miles
81 TYPE5OUT002 'L-EDEWBODY' 1 10 * 0 to 50 miles
*
* *****
* RESULT 6 - CENTERLINE DOSE VS. DISTANCE
* *****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
82 TYPE6NUMBER 0
*
* *****
* RESULT 7 - CENTERLINE RISK VS. DISTANCE

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.4-102 of 1.4-801
Non-Safety Related		Prepared by	Date
Client PSEG Nuclear Development		Reviewed by	Date
Project PSEG ESPA		Approved by	Date
Proj. No 12380-001		Equip. No.	

```

*****
*
83 TYPE7NUMBER 0
*
*****
* RESULT 8 - POPULATION-WEIGHTED RISK
*****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
84 TYPE8NUMBER 6
*
* NAME I1DIS8 I2DIS8
*
85 TYPE8OUT001 'ERL FAT/TOTAL' 1 10 *0-50 MILES
86 TYPE8OUT002 'ERL FAT/TOTAL' 1 2 *0- 2 MILES
87 TYPE8OUT003 'ERL FAT/TOTAL' 1 1 *0- 1 MILES
88 TYPE8OUT004 'ERL FAT/TOTAL' 3 3 *2- 3 MILES
89 TYPE8OUT005 'CAN FAT/TOTAL' 1 10 *0-50 MILES
90 TYPE8OUT006 'CAN FAT/TOTAL' 1 6 *0-10 MILES
*
*****
* RESULT A - PEAK DOSE AT A DISTANCE
*****
*
* NUMA
* TYPEANUMBER 1
*
* NAME I1DISA I2DISA
* TYPEAOUT001 'L-EDEWBODY' 1 1 CCDF
*
*****
* RESULT B - PEAK DOSE AT AN (r, theta) LOCATION
*****
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-103 of 1.4-801

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

93 TYPEBNUMBER 0
 *

 * TERMINATOR CARD

 *

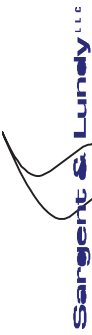
***** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT *****

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ = 386
 NUMBER OF BLANK OR COMMENT RECORDS READ = 292
 NUMBER OF TERMINATOR RECORDS = 1
 NUMBER OF RECORDS PROCESSED = 93
 NUMBER OF PROCESSED RECORDS DUPLICATED = 0
 NUMBER OF PROCESSED RECORDS SORTED = 93

The list of defined organs is as follows (A- is ACUTE and L- is LIFETIME):

- A-SKIN
- A-RED MARR
- A-LUNGS
- A-THYROIDH
- A-STOMACH
- A-LOWER LI
- L-EDEWBODY
- L-RED MARR
- L-BONE SUR
- L-BREAST
- L-LUNGS
- L-THYROID



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

L-LOWER LI
 L-BLAD WAL
 L-LIVER
 L-THYROIDH

Am using a DOSFAC/DOSFAC2/IDCF2 dose factor file

READING FROM A DOSE CONVERSION FILE WITH THE FOLLOWING HEADER:
 MACCS File DOSDATA.INP: Changed by D. CHANIN25-JUN-92, 09:53:47
 Seven new organs added with MACCS Version 1.5.11.1

USING THE FOLLOWING SITE DATA FILE:

MACCS2 SITE FILE FOR PSEG ESPA
 Originator: G. Teagarden (7/14/2008) - Population Updated by S&L 10/2009
 10 SPATIAL INTERVALS
 16 WIND DIRECTIONS
 7 CROP CATEGORIES
 4 WATER PATHWAY ISOTOPES
 2 WATERSHEDS
 63 ECONOMIC REGIONS
 SPATIAL DISTANCES KILOMETERS 48.2804
 1.6093 3.2187 4.8280 6.4374 8.0467 16.0935 32.1869 48.2804
 64.3739 80.4674
 POPULATION
 0. 0. 0. 170. 362. 200986. 177866.
 448847. 363839.
 0. 0. 5. 9. 50. 8729. 27634. 187239.
 951522. 1053252.
 0. 0. 2. 9. 67. 5174. 14923. 171366.
 696849. 709835.
 0. 0. 19. 50. 312. 1875. 7485. 79517.
 168204. 78672.
 0. 0. 14. 47. 42. 1631. 37292. 107168.



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Client	PSEG Nuclear Development		Safety Related	X	Non-Safety Related	Prepared by	Date
Project	PSEG ESPA					Reviewed by	Date
Proj. No	12380-001					Approved by	Date

41884.	87062.	0.	0.	4.	539.	28321.	34813.
0.	0.	0.	0.	0.	9.	135.	895.
14908.	28408.	0.	0.	0.	10.	256.	2592.
0.	0.	0.	0.	5.	190.	23209.	136055.
56.	47396.	0.	6.	9.	828.	33333.	26456.
0.	0.	0.	9.	11.	2398.	6341.	12703.
2693.	19048.	0.	22.	208.	5766.	8588.	6352.
0.	0.	0.	3.	181.	19211.	15582.	15301.
62733.	54529.	0.	70.	373.	5284.	78925.	106793.
0.	0.	0.	0.	164.	3551.	165975.	93291.
26232.	39908.	0.	0.	118.	2432.	179067.	163291.
0.	0.	0.	0.	37.			
14398.	23676.	2.	0.				
0.	0.	2.	0.				
18349.	32002.	3.	0.				
0.	0.	0.	0.				
71710.	242510.	70.	0.				
0.	0.	0.	0.				
90311.	37500.	0.	0.				
0.	0.	0.	0.				
74425.	67892.	0.	0.				
0.	0.	0.	0.				
220746.	138597.	0.	0.				

LAND FRACTION

1.00	0.95	0.30	0.25	0.40	0.75	0.92	0.99	1.00
1.00	1.00	0.93	0.97	1.00	0.95	0.85	0.95	0.99
1.00	1.00	0.99	0.96	0.95	0.99	0.99	0.98	0.98
1.00	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00
0.95	0.95	0.97	1.00	1.00	0.99	0.98	1.00	0.99
0.03	0.25	0.50	0.65	0.75	1.00	0.98	0.99	0.92
0.01	0.00	0.00	0.00	0.33	0.35	0.30	0.03	0.40
0.01	0.00	0.00	0.00	0.03	0.50	0.25	0.35	0.40
0.01	0.00	0.03	0.45	0.60	0.97	0.99	0.99	0.99
0.01	0.00	0.45	0.97	0.92	1.00	1.00	1.00	0.99
0.01	0.00	0.50	0.92	0.95	0.98	1.00	0.98	0.75



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-106 of 1.4-801

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

0.01	0.00	0.45	0.92	0.92	0.99	0.97	0.93	0.75	0.25
0.01	0.00	0.15	0.92	0.92	0.99	0.93	0.40	0.80	0.90
0.01	0.00	0.00	0.70	0.97	0.99	0.93	0.90	0.90	0.90
0.15	0.00	0.01	0.25	0.85	0.99	1.00	1.00	1.00	0.99
0.95	0.30	0.01	0.10	0.35	0.75	0.90	1.00	1.00	0.99

REGION INDEX

1	2	2	2	2	4	5	6
1	2	2	2	2	7	8	9
1	2	2	2	2	10	11	12
1	2	2	2	2	13	14	15
1	2	2	2	2	16	17	18
1	2	2	2	2	19	20	21
1	2	2	2	2	22	23	24
1	2	3	3	3	25	26	27
1	3	3	3	3	28	29	30
1	3	3	3	3	31	32	33
1	3	3	3	3	34	35	36
1	3	3	3	3	37	38	39
1	3	3	3	3	40	41	42
1	3	3	3	3	43	44	45
1	3	3	3	3	46	47	48
1	2	3	3	3	49	50	51
1	2	3	3	3	52	53	54
1	2	3	3	3	55	56	57
1	2	2	2	2	58	59	60
1	2	2	2	2	61	62	63

WATERSHED INDEX

1	1	2	2	1	1	1	1
1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1
2	2	1	1	1	1	1	1
2	2	2	2	2	2	2	1
2	2	2	2	2	1	2	1
2	2	2	1	1	1	1	1
2	2	1	1	1	1	1	1
2	2	1	1	1	1	1	1
2	2	1	1	1	1	1	1
2	2	1	1	1	1	1	1

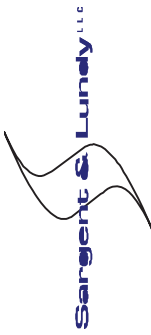


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-107 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

Safety Related	X	Non-Safety Related								
Equip. No.										
2 2 1 1 1 1 1 1 1										
2 2 1 1 1 1 1 1 1										
2 2 2 1 1 1 1 1 1										
1 2 2 2 1 1 1 1 1										
CROP SEASON AND SHARE										
1 PASTURE			90.	270.	0.4100					
2 STORED FORAGE			150.	240.	0.1300					
3 GRAINS			150.	240.	0.2100					
4 GRN LEAFY VEGETABLES			150.	240.	0.0020					
5 OTHER FOOD CROPS			150.	240.	0.0040					
6 LEGUMES AND SEEDS			150.	240.	0.1500					
7 ROOTS AND TUBERS			150.	240.	0.0030					
WATERSHED DEFINITION -- INITIAL AND ANNUAL WASHOFF AND INGESTION FACTORS										
1 Sr-89					5.00E-06	0.0				
2 Sr-90					5.00E-06	0.0				
3 Cs-134					5.00E-06	0.0				
4 Cs-137					5.00E-06	0.0				
REGIONAL ECONOMIC DATA										
01 EXCLUSION			0.45	0.090	1861.3	13673.7	235830.7			
02 SALEM			0.45	0.090	1861.3	13673.7	235830.7			
03 N_CASTLE			0.26	0.079	0948.0	19736.6	303569.3			
04 N-20			0.20	0.037	2157.6	20444.1	277602.8			
05 N-30			0.05	0.017	1958.8	18162.9	307006.4			
06 N-40			0.13	0.100	1964.7	26183.0	351488.1			
07 NNE-20			0.25	0.036	3144.9	26457.8	247747.7			
08 NNE-30			0.12	0.013	2768.2	26733.3	250181.2			
09 NNE-40			0.11	0.026	1981.1	22799.4	265861.5			
10 NE-10			0.44	0.086	1981.3	13740.5	233949.1			
11 NE-20			0.32	0.056	2672.0	21747.8	243357.2			
12 NE-30			0.16	0.016	3403.4	29136.5	253768.9			
13 NE-40			0.15	0.027	3187.8	23824.1	271205.3			
14 ENE-5			0.43	0.083	2101.4	13807.3	232067.4			
15 ENE-10			0.25	0.020	4021.7	14876.9	201961.4			
16 ENE-20			0.29	0.035	3504.3	16494.4	215132.8			
17 ENE-30			0.13	0.007	5595.6	19080.4	237336.0			



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No.	2009-11222	
Rev.	2	Date
Page	1.4-108 of 1.4-801	

Client	PSEG Nuclear Development		Safety Related	X	Non-Safety Related	Prepared by	Date
	Project	PSEG ESPA					
Proj. No	12380-001		Equip. No.				
18	ENE-40		0.09	0.003	6164.9	18356.6	245615.2
19	E-5		0.30	0.036	3541.6	14609.5	209487.9
20	CUMBERLAND		0.23	0.012	4261.8	15010.6	198198.1
21	E-30		0.17	0.007	4389.2	16606.7	223788.3
22	E-40		0.07	0.000	4218.1	19155.6	265936.7
23	ESE-5		0.32	0.044	3301.6	14475.8	213251.2
24	ESE-30		0.19	0.009	3888.5	16201.6	218896.0
25	CAPE_MAY		0.06	0.000	2768.8	19774.4	280989.8
26	KENT_DE		0.49	0.088	1714.9	10388.2	200707.0
27	SE-40		0.43	0.014	3906.0	13360.2	224540.9
28	SES-5		0.38	0.084	1331.5	15062.4	252138.1
29	SES-30		0.49	0.078	2062.6	10727.1	203341.3
30	SES-40		0.47	0.023	3800.6	12421.5	216512.7
31	S-5		0.27	0.079	0986.4	19269.2	298426.2
32	S-10		0.46	0.087	1599.9	11790.5	216136.3
33	S-20		0.50	0.082	1767.9	10159.8	199201.7
34	S-30		0.52	0.063	1926.8	09474.5	194685.8
35	S-40		0.53	0.036	2423.0	09700.5	203968.5
36	SWS-10		0.40	0.103	1231.4	15426.4	272836.0
37	SWS-20		0.63	0.085	1270.4	09569.8	270201.8
38	SWS-30		0.63	0.064	1347.3	09240.4	264682.3
39	SWS-40		0.63	0.064	1166.0	10030.4	290197.2
40	SW-10		0.43	0.125	1256.5	15562.8	286509.2
41	SW-20		0.65	0.171	1368.6	09985.2	279459.4
42	SW-30		0.66	0.167	1334.9	09820.8	280989.8
43	SW-40		0.64	0.187	1402.0	10172.6	279384.1
44	WSW-10		0.32	0.089	1760.8	18256.9	257908.5
45	WSW-20		0.39	0.123	1997.0	16311.0	242353.7
46	WSW-30		0.33	0.313	0853.2	14611.5	278480.9
47	WSW-40		0.23	0.201	1473.6	17532.4	294788.4
48	W-10		0.31	0.088	1635.7	18484.6	264933.2
49	CECIL		0.35	0.095	2198.4	17460.1	233321.9
50	W-30		0.31	0.245	1284.0	15950.9	262675.3
51	W-40		0.33	0.298	1003.5	15264.2	269449.1
52	WINW-10		0.28	0.083	1260.6	19167.5	286007.4



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

95 EZWTFRAC001 0.05
 ***** RECORD NUMBER 95 REPLACES RECORD NUMBER 36 *****

*
 * LAST RING IN THE MOVEMENT ZONE
 * A ZERO TURNS OFF THE EVACUATION MODEL
 *

96 EZLASM0V001 0
 ***** RECORD NUMBER 96 REPLACES RECORD NUMBER 37 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 1 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 1
 NUMBER OF RECORDS CHANGED = 3
 NUMBER OF RECORDS ADDED = 0

NO EVACUATION REQUESTED

***** WARNING -- THE FOLLOWING RECORDS WERE NEVER ACCESSED *****
 DESCRIPTIVE TITLE DESCRIBING THIS "EARLY" INPUT FILE

USER INPUT IS READ FROM UNIT 26
 RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.
 THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
 THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

RECORD
 NUMBER RECORD



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

* FILE NAME E.3.INP
*
* Sargent & Lundy (10/2009)
*
*****
* DESCRIPTIVE TITLE DESCRIBING THIS "CHRONC" INPUT FILE
*
1 CHCHNAME001 'GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS '
*
* ECONOMIC DATA USED: 2009 CPI, 2002 CENSUS OF AGRICULTURE, 2005 BEA & BLS DATA
*
*****
* EMERGENCY RESPONSE COST DATA
*****
* EMERGENCY PHASE - DAILY COST FOR PERSON RELOCATED ($/PERSON-DAY)
*
2 CHEVACST001 53.19 * 27.00 * 1.97
*
* INTERMEDIATE PHASE - DAILY COST FOR PERSON RELOCATED ($/PERSON-DAY)
*
3 CHRELCST001 53.19 * 27.00 * 1.97
*
*****
* LONG TERM PROTECTIVE ACTION DATA
*****
*
4 DUR_INTPHAS 0.0 *(in seconds) (no intermediate phase)
*
* LONG-TERM PHASE DOSE PROJECTION PERIOD, THE DURATION OF THE EXPOSURE
* PERIOD OVER WHICH THE LONG-TERM DOSE CRITERION IS EVALUATED (SECONDS)
*
5 CHTMPACT001 1.58E8 * seconds (5 YEARS)
*

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-112 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

* DOSE CRITERION FOR INTERMEDIATE PHASE RELOCATION (SV) (YEAR 0-0.5)
*
6 CHDSCRTI001 1.0E5 (NO INTERMEDIATE PHASE RELOCATION)
*
* DOSE CRITERION FOR LONG-TERM PHASE RELOCATION (SV) * (YEAR 0.5-5)
*
7 CHDSCRILT001 0.03 (3 REM)
*
* CRITICAL ORGAN NAME FOR LONG-TERM ACTIONS
*
8 CHCRTOCR001 'L-EDEWBODY'
*
* LONG TERM EXPOSURE PERIOD
*
9 CHEXPTIM001 1.58E9 * (50 YEARS PER EPA STANDARD DEFAULT EXPONENTIAL FACTORS)
*
*****
* DECONTAMINATION PLAN DATA BLOCK
*****
*
* NUMBER OF LEVELS OF DECONTAMINATION
*
10 CHLVLDEC001 2
*
* DECONTAMINATION TIMES CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
* (SECONDS)
*
11 CHTIMDEC001 5.184E6 1.0368E7 (60, 120 DAYS)
*
* DOSE REDUCTION FACTORS CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
*
12 CHDSRFCT001 3. 15.
*
* COST OF FARM DECONTAMINATION PER FARMLAND UNIT AREA (DOLLARS/HECTARE)
* FOR THE VARIOUS LEVELS OF DECONTAMINATION

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-113 of 1.4-801

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
Prepared by		Date
Reviewed by		Date
Approved by		Date

13	CHCDFRM0001	1109.	2463.	
*	* COST OF NONFARM DECONTAMINATION PER RESIDENT PERSON (DOLLARS/PERSON)			
*	* FOR THE VARIOUS LEVELS OF DECONTAMINATION			
14	CHCDNFRM001	5910.	15760.	
*	* FRACTION OF FARMLAND DECONTAMINATION COST DUE TO LABOR			
*	* FOR THE VARIOUS DECONTAMINATION LEVELS			
15	CHFRFDL0001	.3	.35	
*	* FRACTION OF NON-FARM DECONTAMINATION COST DUE TO LABOR			
*	* FOR THE VARIOUS DECONTAMINATION LEVELS			
16	CHFRNFDL001	.7	.5	
*	* FRACTION OF TIME WORKERS IN FARM AREAS SPEND IN CONTAMINATED AREAS			
*	* FOR THE VARIOUS DECONTAMINATION LEVELS			
17	CHTFWKF0001	.10	.33	
*	* FRACTION OF TIME WORKERS IN NON-FARM AREAS SPEND IN CONTAMINATED AREAS			
*	* FOR THE VARIOUS DECONTAMINATION LEVELS			
18	CHTFWKNF001	.33	.33	
*	* AVERAGE COST OF DECONTAMINATION LABOR (DOLLARS/MAN-YEAR)			
19	CHDLBCST001	68950.		
*	* INTERDICTION COST DATA BLOCK			

 * INTERDICTION COST DATA BLOCK *****



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

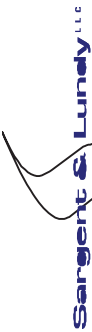
* DEPRECIATION (DETERIORATION) RATE DURING INTERDICTION PERIOD (PER YEAR)
 *
 20 CHDPRATE001 .20 *(NUREG/CR-4551 PART 7 TABLE 5.1)
 *
 * INVESTMENT INCOME RETURN (DISCOUNT RATE) DURING INTERDICTION PERIOD (PER YEAR)
 * THIS VALUE SHOULD BE DERIVED AS A REAL RETURN RATE ADJUSTED FOR INFLATION.
 *
 21 CHDSRATE001 .07 *(NEI 05-01)
 *
 * POPULATION RELOCATION COST (DOLLARS/PERSON)
 *
 22 CHPOPCST001 9850.
 *

 * GROUNDSHINE WEATHERING DEFINITION DATA BLOCK

 *
 * NUMBER OF TERMS IN THE GROUNDSHINE WEATHERING RELATIONSHIP (EITHER 1 OR 2)
 *
 23 CHNGWTRM001 2
 *
 * GROUNDSHINE WEATHERING COEFFICIENTS
 *
 24 CHGWCOEF001 0.5 0.5
 *
 * HALF LIVES CORRESPONDING TO THE GROUNDSHINE WEATHERING COEFFICIENTS (S)
 *
 25 CHTGWHLF001 1.6E7 2.8E9
 *

 * RESUSPENSION WEATHERING DEFINITION DATA BLOCK

 *
 * NUMBER OF TERMS IN THE RESUSPENSION WEATHERING RELATIONSHIP



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

26 CHNRWTRM001 3
 * RESUSPENSION CONCENTRATION COEFFICIENTS (/ METER)
 * RELATIONSHIP BETWEEN GROUND CONCENTRATION AND INSTANTANEOUS AIR CONC.
 *
 27 CHRWCOEF001 1.0E-5 1.0E-7 1.0E-9 *(SAMPLE PROBLEM A, JON HELTON)
 * HALF-LIVES CORRESPONDING TO THE RESUSPENSION CONCENTRATION COEFFICIENTS (S)
 *
 28 CHTRWHLF001 1.6E7 1.6E8 1.6E9 *(6 MONTHS, 5 YEARS, 50 YEARS)
 *
 *
 * REGIONAL CHARACTERISTICS DATA
 *
 * FRACTION OF AREA THAT IS LAND IN THE REGION
 *
 29 CHFRACLD001 0.95 *(DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
 * FRACTION OF LAND DEVOTED TO FARMING IN THE REGION
 *
 30 CHFRFCFRM001 0.382 *(DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
 * AVERAGE VALUE OF ANNUAL FARM PRODUCTION IN THE REGION (DOLLARS/HECTARE)
 * (CASH RECEIPTS FROM FARMING PLUS VALUE OF HOME CONSUMPTION)/(LAND IN FARMS)
 *
 31 CHFRMPRD001 371.0 *(DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
 * FRACTION OF FARM PRODUCTION RESULTING FROM DAIRY PRODUCTION IN THE REGION
 * (VALUE OF MILK PRODUCED)/(CASH RECEIPTS FROM FARMING PLUS HOME CONSUMPTION)
 *
 32 CHDPFRCT001 0.198 *(DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
 * VALUE OF FARM WEALTH (DOLLARS/HECTARE)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-116 of 1.4-801

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
Prepared by		Date
Reviewed by		Date
Approved by		Date

```

* (AVERAGE VALUE PER HECTARE OF FARM LAND AND BUILDINGS TO 50 MILES)
*
33 CHVALWF0001 16636.
*
* FRACTION OF FARM WEALTH IN IMPROVEMENTS FOR THE REGION
*
34 CHFRFIM0001 0.25 * SURRY & PEACH BOTTOM (NUREG/CR-4551 PART 7, TABLE 5.4)
*
* NON-FARM WEALTH, PROPERTY AND IMPROVEMENTS FOR THE REGION (DOLLARS/PERSON)
* THE VALUE OF ALL RESIDENTIAL, BUSINESS, AND PUBLIC ASSETS WHICH WOULD BE
* LOST IN THE EVENT OF PERMANENT INTERDICTION (CONDEMNATION) OF THE AREA
*
35 CHVALWNF001 275924.
*
* FRACTION OF NON-FARM WEALTH IN IMPROVEMENTS FOR THE REGION
*
36 CHFRNFIM001 0.8
*
*****
* FOOD INGESTION MODEL
*****
*
*NEW COMIDA2-BASED FOOD INGESTION MODEL
*
37 CHFDPATH001 'NEW'
*
* FILE PATH OF THE COMIDA2 FILE
*
38 BIN_FILE001 'C:\MACCS2\SAMP_A.BIN'
*
* THE MAXIMUM ALLOWABLE FOOD INGESTION DOSE FROM MILK CROPS
*
* EFFECTIVE THYROID (SV)
39 DOSEMILK001 0.0025 0.025
40 DOSEOTHR001 0.0025 0.025

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-117 of 1.4-801

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

```

*
* EFFECTIVE THYROID (SV)
41 DOSELONG001 0.005 0.050
*
* NUMBER OF NUCLIDES IN THE WATER INGESTION PATHWAY MODEL
*
42 CHNUMWPI001 4
*
* TABLE OF NUCLIDE DEFINITIONS IN THE WATER INGESTION PATHWAY MODEL
*
* IF A SITE DATA FILE IS DEFINED, THE DATA DEFINING THE WATERSHED INGESTION
* FACTOR IS SUPERSEDED BY THE CORRESPONDING DATA IN THE SITE DATA FILE
*
*
* INITIAL ANNUAL INGESTION FACTOR
* WATER WASHOFF WASHOFF (Bq INGESTED) /
* NUCLIDE FRACTION RATE (Bq IN WATER)
*
* NAMWPI WSHRTA WINGF
43 CHWTRISO001 Sr-89 0.01 0.004 5.0E-6
44 CHWTRISO002 Sr-90 0.01 0.004 5.0E-6
45 CHWTRISO003 Cs-134 0.005 0.001 5.0E-6
46 CHWTRISO004 Cs-137 0.005 0.001 5.0E-6
*
*****
* SPECIAL OPTIONS DATA BLOCK
*****
*
* DETAILED PRINT OPTION CONTROL SWITCHES, LOOK AT THE CODE BEFORE TURNING ON!!
*
* KSWDSC
*
47 CHKSWTCH001 0
*
*****
* POPULATION DOSE RESULTS
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.4-118 of 1.4-801
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

* DEFINE THE TYPE 9 RESULTS
* LONG-TERM POPULATION DOSE IN A GIVEN REGION BROKEN DOWN BY THE 12 PATHWAYS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
*
48 TYPE9NUMBER 2 (UP TO 10 ALLOWED)
*
* ORGNAM INNER OUTER
*
49 TYPE9OUT001 'L-EDEWBODY' 1 6 (0-10 MILES)
50 TYPE9OUT002 'L-EDEWBODY' 1 10 (0-50 MILES)
*
*****
* ECONOMIC COST RESULTS
*****
* ECONOMIC COST RESULTS IN A REGION BROKEN DOWN BY 12 TYPES OF COSTS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
*
51 TYP10NUMBER 1 * (UP TO 10 ALLOWED)
*
* INNER OUTER
*
52 TYP10OUT001 1 10 *(0-50 MILES)
*
*****
* ACTION DISTANCE RESULTS
*****
*
* DEFINE A FLAG THAT CONTROLS THE PRODUCTION OF THE ACTION DISTANCE RESULTS
*
* SPECIFYING A VALUE OF .TRUE. TURNS ON ALL 8 OF THE ACTION DISTANCE RESULTS,

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

* A VALUE OF .FALSE. WILL ELIMINATE THE ACTION DISTANCE RESULTS FROM THE OUTPUT.
*
53 TYP11FLAG11 .FALSE.
*
*****
* IMPACTED AREA/POPULATION RESULTS
*****
*
* IMPACTED AREA/POPULATION RESULTS IN A REGION BROKEN DOWN BY 6 TYPES OF IMPACTS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 8
*
54 TYP12NUMBER 1 (UP TO 10 ALLOWED)
*
* INNER OUTER
*
55 TYP12OUT01 1 10 (0-50 MILES)
*
*****
* MAXIMAL ANNUAL FOOD INGESTION DOSE TO AN INDIVIDUAL
*****
*
* MAXIMAL ANNUAL FOOD INGESTION DOSE TO AN INDIVIDUAL
*
* This result is calculated after accounting for temporary or
* permanent interdiction. It is only available for the "new" food model.
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
*
56 TYP13NUMBER 0 (UP TO 10 ALLOWED)
*
*****
* TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT *****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X Non-Safety Related	Page 1.4-120 of 1.4-801	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ = 314
 NUMBER OF BLANK OR COMMENT RECORDS READ = 257
 NUMBER OF TERMINATOR RECORDS = 1
 NUMBER OF RECORDS PROCESSED = 56
 NUMBER OF PROCESSED RECORDS DUPLICATED = 0
 NUMBER OF PROCESSED RECORDS SORTED = 56

COMIDA2 binary file header =
 COMIDA2 01/14/2004 13:06:02 Version 1.11.1, 01/12/2004

COMIDA2 descriptive title =
 MACCS File DOSDATA.INP: Changed by D. CHANIN25-JUN-92, 09:53:47

Seven new organs added with MACCS Version 1.5.11.1

A SITE DATA FILE IS BEING USED FOR BOTH "EARLY" AND "CHRONC"

7 CANCER EFFECTS ARE DEFINED IN THE MODEL.

INDEX	CANCER EFFECT	LEUKEMIA	BONE	BREAST	LUNG	THYROID	GI	OTHER	ORGAN	ALPHA	BETA	CFRISK	CIRISK
1		L-RED MARR	L-BONE SUR	L-BREAST	L-LUNGS	L-THYROIDH	L-LOWER LI	L-EDEWBODY	L-RED MARR	1.000E+00	0.000E+00	9.700E-03	0.000E+00
2		BONE	BREAST	LUNG	THYROID	GI	OTHER		L-BONE SUR	1.000E+00	0.000E+00	1.200E-04	0.000E+00
3									L-BREAST	1.000E+00	0.000E+00	5.400E-03	1.700E-02
4									L-LUNGS	1.000E+00	0.000E+00	1.550E-02	0.000E+00
5									L-THYROIDH	1.000E+00	0.000E+00	7.200E-04	7.200E-03
6									L-LOWER LI	1.000E+00	0.000E+00	3.360E-02	0.000E+00
7									L-EDEWBODY	1.000E+00	0.000E+00	2.760E-02	0.000E+00

TIME OF HOTSPOT RELOCATION IS 4.3200E+04.
 TIME OF NORMAL RETURN IS 8.640E+04 AND THE EMERGENCY PHASE ENDS AT 6.048E+05.



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-121 of 1.4-801

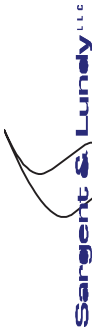
Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

GROUNDSHINE SHIELDING FACTOR = 0.330
 RESUSPENSION PROTECTION FACTOR = 0.410
 BREATHING RATE (CUBIC M/S) = 2.660E-04

DISPERSION MODEL FLAG IS 2

WINDROSE PROBABILITIES BY WIND DIRECTION AND MET BIN NUMBER

BIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	0.1923	0.0000	0.2692	0.0385	0.1154	0.0769	0.0000	0.0385	0.0385	0.0000	0.0000	0.0000	0.0385	0.0769	0.0000	0.1154
2	0.0050	0.0050	0.0274	0.0498	0.0871	0.0920	0.2438	0.1542	0.0622	0.0398	0.0199	0.0025	0.0149	0.0149	0.0995	0.0821
3	0.0000	0.0303	0.0606	0.0000	0.0000	0.0606	0.0303	0.0909	0.0909	0.2121	0.1212	0.0909	0.1212	0.0303	0.0000	0.0606
4	0.0734	0.0765	0.0550	0.0489	0.0550	0.0673	0.0642	0.0765	0.0765	0.0887	0.0703	0.0642	0.0398	0.0306	0.0336	0.0795
5	0.0852	0.0762	0.1181	0.0658	0.0688	0.0553	0.0553	0.0688	0.0703	0.0538	0.0493	0.0538	0.0463	0.0209	0.0404	0.0717
6	0.0758	0.0735	0.0719	0.0579	0.0774	0.0618	0.0970	0.0774	0.0500	0.0970	0.0868	0.0219	0.0039	0.0172	0.0508	0.0797
7	0.0821	0.0709	0.0311	0.0311	0.0684	0.1356	0.1791	0.0585	0.0659	0.0435	0.0249	0.0050	0.0000	0.0112	0.1119	0.0808
8	0.0144	0.0072	0.0108	0.0072	0.0325	0.2022	0.2455	0.0975	0.0144	0.0108	0.0072	0.0000	0.0000	0.0072	0.2599	0.0830
9	0.0326	0.0543	0.0217	0.0109	0.0870	0.0870	0.0761	0.0435	0.0870	0.1087	0.0761	0.1087	0.0761	0.0543	0.0326	0.0435
10	0.0352	0.0462	0.0527	0.0637	0.0593	0.0571	0.0725	0.0637	0.0593	0.0923	0.0879	0.0901	0.1011	0.0308	0.0330	0.0549
11	0.0400	0.0471	0.0986	0.0857	0.0657	0.0714	0.1100	0.0786	0.0786	0.0729	0.0757	0.0386	0.0200	0.0371	0.0400	0.0400
12	0.0637	0.0922	0.0600	0.0817	0.0735	0.0765	0.1319	0.0802	0.0967	0.0427	0.0195	0.0060	0.0022	0.0210	0.1042	0.0480
13	0.0833	0.0208	0.0625	0.0208	0.0625	0.1042	0.0417	0.0208	0.0208	0.1250	0.0417	0.1250	0.0417	0.1250	0.1042	0.0000
14	0.0549	0.0506	0.0506	0.0506	0.0506	0.0380	0.0253	0.0295	0.0928	0.1013	0.0970	0.0886	0.1055	0.0464	0.0675	0.0506
15	0.0224	0.0224	0.0705	0.0449	0.0288	0.0353	0.0705	0.0737	0.1154	0.0737	0.1186	0.0321	0.0064	0.0609	0.1763	0.0481
16	0.0180	0.0420	0.0571	0.0841	0.0270	0.0180	0.0661	0.0631	0.0661	0.0571	0.0330	0.0030	0.0000	0.0030	0.3964	0.0661
17	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
18	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
19	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
20	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
21	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
22	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
23	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-122 of 1.4-801
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

24	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
25	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
26	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
27	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
28	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
29	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
30	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
31	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
32	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
33	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
34	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
35	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
36	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
37	0.0561	0.0592	0.0619	0.0568	0.0581	0.0672	0.1015	0.0693	0.0659	0.0687	0.0674	0.0459	0.0274	0.0283	0.0989	0.0675
38	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
39	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
40	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
41	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Processing a Site Data File with Header: MACCS2 SITE FILE FOR PSEG ESPA
 Originator: G. Teagarden (7/14/2008) - Population Updated by S&L 10/2009



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.4-123 of 1.4-801
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

THIS PROGRAM CURRENTLY ALLOWS THE GENERATION OF UP TO 394 RESULTS

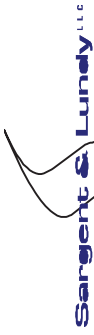
YOU HAVE REQUESTED 16 RESULTS FROM "EARLY" COMPOSED OF:

- 5 RESULTS OF TYPE 1
- 0 RESULTS OF TYPE 2
- 2 RESULTS OF TYPE 3
- 0 RESULTS OF TYPE 4
- 2 RESULTS OF TYPE 5
- 0 RESULTS OF TYPE 6
- 0 RESULTS OF TYPE 7
- 6 RESULTS OF TYPE 8
- 1 RESULTS OF TYPE A
- 0 RESULTS OF TYPE B

YOU HAVE REQUESTED 55 RESULTS FROM "CHRONC" COMPOSED OF:

- 34 RESULTS OF TYPE 9
- 13 RESULTS OF TYPE 10
- 0 RESULTS OF TYPE 11
- 8 RESULTS OF TYPE 12
- 0 RESULTS OF TYPE 13

TRIAL	DAY	HOUR	BIN	PRBMET
1	152	7	18	4.00E-04
For Julian Day 152, selecting COMIDA2 results # 4 of 9				
2	152	13	24	1.14E-04
For Julian Day 152, selecting COMIDA2 results # 4 of 9				
3	152	18	21	2.40E-03
For Julian Day 152, selecting COMIDA2 results # 4 of 9				
4	153	4	3	3.14E-04
For Julian Day 153, selecting COMIDA2 results # 4 of 9				
5	153	7	26	2.95E-04
For Julian Day 153, selecting COMIDA2 results # 4 of 9				



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-124 of 1.4-801

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA				
Proj. No	12380-001	Equip. No.			
		Prepared by		Date	
		Reviewed by		Date	
		Approved by		Date	

6	153	9	26	2.95E-04
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9	
7	153	12	25	3.04E-04
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9	
8	153	14	25	3.04E-04
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9	
9	154	24	9	8.75E-04
For Julian Day 154,	selecting	COMIDA2	results # 4 of 9	
10	155	17	6	1.22E-02
For Julian Day 155,	selecting	COMIDA2	results # 4 of 9	
11	156	20	26	2.95E-04
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9	
12	156	23	26	2.95E-04
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9	
13	157	2	25	3.04E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
14	157	3	24	1.14E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
15	157	4	22	7.23E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
16	157	17	27	2.76E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
17	157	18	27	2.76E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
18	157	19	22	7.23E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
19	158	17	4	3.11E-03
For Julian Day 158,	selecting	COMIDA2	results # 4 of 9	
20	159	7	3	3.14E-04
For Julian Day 159,	selecting	COMIDA2	results # 4 of 9	
21	159	11	1	2.47E-04
For Julian Day 159,	selecting	COMIDA2	results # 4 of 9	
22	160	7	10	4.33E-03
For Julian Day 160,	selecting	COMIDA2	results # 4 of 9	
23	160	14	12	1.27E-02



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-125 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 160, selecting COMIDA2 results # 4 of 9
 24 162 12 36 2.19E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 25 162 14 36 2.19E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 26 162 15 35 2.47E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 27 162 17 34 1.14E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 28 162 18 32 3.61E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 29 162 20 19 9.51E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 30 162 24 20 3.17E-03

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 31 163 14 17 3.45E-03

For Julian Day 163, selecting COMIDA2 results # 4 of 9
 32 163 19 18 4.00E-04

For Julian Day 163, selecting COMIDA2 results # 4 of 9
 33 166 10 7 7.65E-03

For Julian Day 166, selecting COMIDA2 results # 4 of 9
 34 166 16 36 2.19E-04

For Julian Day 166, selecting COMIDA2 results # 4 of 9
 35 166 18 36 2.19E-04

For Julian Day 166, selecting COMIDA2 results # 4 of 9
 36 166 19 35 2.47E-04

For Julian Day 166, selecting COMIDA2 results # 4 of 9
 37 167 12 5 6.36E-03

For Julian Day 167, selecting COMIDA2 results # 5 of 9
 38 167 21 15 2.97E-03

For Julian Day 167, selecting COMIDA2 results # 5 of 9
 39 168 4 11 6.66E-03

For Julian Day 168, selecting COMIDA2 results # 5 of 9
 40 169 7 31 2.85E-04

For Julian Day 169, selecting COMIDA2 results # 5 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-126 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related
41	169	10	31 2.85E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
42	169	11	31 2.85E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
43	169	13	30 2.57E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
44	169	15	29 1.14E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
45	169	16	28 1.14E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
46	169	18	30 2.57E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
47	169	20	29 1.14E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
48	169	21	27 2.76E-04
For Julian Day 169,	selecting	COMIDA2	results # 5 of 9
49	173	16	8 2.64E-03
For Julian Day 173,	selecting	COMIDA2	results # 5 of 9
50	174	16	25 3.04E-04
For Julian Day 174,	selecting	COMIDA2	results # 5 of 9

TRIAL	DAY	HOUR	BIN	PRBMET
51	174	17	24	1.14E-04
For Julian Day 174,	selecting	COMIDA2	results # 5 of 9	
52	174	18	23	1.14E-04
For Julian Day 174,	selecting	COMIDA2	results # 5 of 9	
53	177	11	36	2.19E-04
For Julian Day 177,	selecting	COMIDA2	results # 5 of 9	
54	177	13	35	2.47E-04
For Julian Day 177,	selecting	COMIDA2	results # 5 of 9	
55	177	14	35	2.47E-04
For Julian Day 177,	selecting	COMIDA2	results # 5 of 9	
56	180	21	36	2.19E-04
For Julian Day 180,	selecting	COMIDA2	results # 5 of 9	



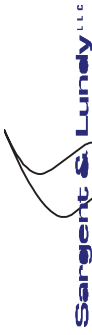
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-127 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

57	For Julian Day 180, selecting COMIDA2 results # 5 of 9	23	35	2.47E-04
58	For Julian Day 180, selecting COMIDA2 results # 5 of 9	24	34	1.14E-04
59	For Julian Day 183, selecting COMIDA2 results # 5 of 9	8	5	6.36E-03
60	For Julian Day 183, selecting COMIDA2 results # 5 of 9	13	26	2.95E-04
61	For Julian Day 183, selecting COMIDA2 results # 5 of 9	15	25	3.04E-04
62	For Julian Day 183, selecting COMIDA2 results # 5 of 9	16	22	7.23E-04
63	For Julian Day 183, selecting COMIDA2 results # 5 of 9	17	32	3.61E-04
64	For Julian Day 185, selecting COMIDA2 results # 5 of 9	15	4	3.11E-03
65	For Julian Day 186, selecting COMIDA2 results # 5 of 9	11	2	3.82E-03
66	For Julian Day 186, selecting COMIDA2 results # 5 of 9	15	8	2.64E-03
67	For Julian Day 187, selecting COMIDA2 results # 5 of 9	2	31	2.85E-04
68	For Julian Day 187, selecting COMIDA2 results # 5 of 9	3	30	2.57E-04
69	For Julian Day 187, selecting COMIDA2 results # 5 of 9	4	29	1.14E-04
70	For Julian Day 189, selecting COMIDA2 results # 5 of 9	2	14	2.25E-03
71	For Julian Day 190, selecting COMIDA2 results # 5 of 9	12	6	1.22E-02
72	For Julian Day 190, selecting COMIDA2 results # 5 of 9	22	16	3.17E-03
73	For Julian Day 194, selecting COMIDA2 results # 5 of 9	5	36	2.19E-04
74	For Julian Day 194, selecting COMIDA2 results # 6 of 9	8	32	3.61E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-128 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001 Equip. No.	Approved by
	Date
	Date
	Date

For Julian Day 194, selecting COMIDA2 results # 6 of 9
75 194 14 27 2.76E-04

For Julian Day 194, selecting COMIDA2 results # 6 of 9
76 194 18 32 3.61E-04

For Julian Day 194, selecting COMIDA2 results # 6 of 9
77 196 3 10 4.33E-03

For Julian Day 196, selecting COMIDA2 results # 6 of 9
78 196 15 35 2.47E-04

For Julian Day 196, selecting COMIDA2 results # 6 of 9
79 198 20 11 6.66E-03

For Julian Day 198, selecting COMIDA2 results # 6 of 9
80 200 8 32 3.61E-04

For Julian Day 200, selecting COMIDA2 results # 6 of 9
81 202 24 9 8.75E-04

For Julian Day 202, selecting COMIDA2 results # 6 of 9
82 204 5 13 4.57E-04

For Julian Day 204, selecting COMIDA2 results # 6 of 9
83 204 16 7 7.65E-03

For Julian Day 204, selecting COMIDA2 results # 6 of 9
84 206 18 6 1.22E-02

For Julian Day 206, selecting COMIDA2 results # 6 of 9
85 209 2 5 6.36E-03

For Julian Day 209, selecting COMIDA2 results # 6 of 9
86 209 10 36 2.19E-04

For Julian Day 209, selecting COMIDA2 results # 6 of 9
87 209 13 32 3.61E-04

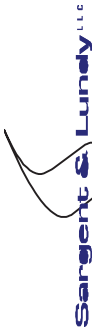
For Julian Day 209, selecting COMIDA2 results # 6 of 9
88 209 24 20 3.17E-03

For Julian Day 209, selecting COMIDA2 results # 6 of 9
89 210 2 19 9.51E-04

For Julian Day 210, selecting COMIDA2 results # 6 of 9
90 210 7 3 3.14E-04

For Julian Day 210, selecting COMIDA2 results # 6 of 9
91 210 10 4 3.11E-03

For Julian Day 210, selecting COMIDA2 results # 6 of 9

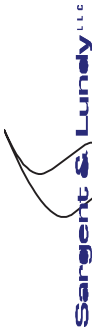


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-129 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

92	210	12	4	3.11E-03					
For Julian Day 210,	selecting	COMIDA2	results #	6 of 9					
93	211	3	10	4.33E-03					
For Julian Day 211,	selecting	COMIDA2	results #	6 of 9					
94	215	2	9	8.75E-04					
For Julian Day 215,	selecting	COMIDA2	results #	6 of 9					
95	215	7	3	3.14E-04					
For Julian Day 215,	selecting	COMIDA2	results #	6 of 9					
96	216	4	3	3.14E-04					
For Julian Day 216,	selecting	COMIDA2	results #	6 of 9					
97	216	6	9	8.75E-04					
For Julian Day 216,	selecting	COMIDA2	results #	6 of 9					
98	217	3	11	6.66E-03					
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9					
99	217	12	31	2.85E-04					
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9					
100	217	16	30	2.57E-04					
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9					
TRIAL	DAY	HOUR	BIN	PRBMET					
101	217	18	30	2.57E-04					
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9					
102	217	19	29	1.14E-04					
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9					
103	217	20	27	2.76E-04					
For Julian Day 217,	selecting	COMIDA2	results #	6 of 9					
104	218	6	19	9.51E-04					
For Julian Day 218,	selecting	COMIDA2	results #	6 of 9					
105	218	23	12	1.27E-02					
For Julian Day 218,	selecting	COMIDA2	results #	6 of 9					
106	223	22	7	7.65E-03					
For Julian Day 223,	selecting	COMIDA2	results #	7 of 9					
107	224	18	17	3.45E-03					
For Julian Day 224,	selecting	COMIDA2	results #	7 of 9					



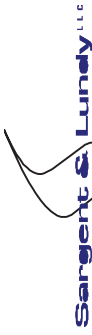
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-130 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

108	226	9	26	2.95E-04
	For Julian Day 226,	selecting	COMIDA2	results # 7 of 9
109	226	12	24	1.14E-04
	For Julian Day 226,	selecting	COMIDA2	results # 7 of 9
110	226	14	6	1.22E-02
	For Julian Day 226,	selecting	COMIDA2	results # 7 of 9
111	226	19	4	3.11E-03
	For Julian Day 226,	selecting	COMIDA2	results # 7 of 9
112	227	16	18	4.00E-04
	For Julian Day 227,	selecting	COMIDA2	results # 7 of 9
113	228	3	3	3.14E-04
	For Julian Day 228,	selecting	COMIDA2	results # 7 of 9
114	228	5	10	4.33E-03
	For Julian Day 228,	selecting	COMIDA2	results # 7 of 9
115	228	20	21	2.40E-03
	For Julian Day 228,	selecting	COMIDA2	results # 7 of 9
116	229	6	17	3.45E-03
	For Julian Day 229,	selecting	COMIDA2	results # 7 of 9
117	230	9	26	2.95E-04
	For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
118	230	12	26	2.95E-04
	For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
119	230	15	25	3.04E-04
	For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
120	230	16	25	3.04E-04
	For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
121	230	17	24	1.14E-04
	For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
122	230	18	22	7.23E-04
	For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
123	230	23	20	3.17E-03
	For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
124	231	13	36	2.19E-04
	For Julian Day 231,	selecting	COMIDA2	results # 7 of 9
125	231	14	36	2.19E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-131 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 231, selecting COMIDA2 results # 7 of 9
 126 231 16 35 2.47E-04

For Julian Day 231, selecting COMIDA2 results # 7 of 9
 127 231 18 34 1.14E-04

For Julian Day 231, selecting COMIDA2 results # 7 of 9
 128 234 14 30 2.57E-04

For Julian Day 234, selecting COMIDA2 results # 7 of 9
 129 235 16 5 6.36E-03

For Julian Day 235, selecting COMIDA2 results # 7 of 9
 130 236 13 1 2.47E-04

For Julian Day 236, selecting COMIDA2 results # 7 of 9
 131 238 7 11 6.66E-03

For Julian Day 238, selecting COMIDA2 results # 7 of 9
 132 243 12 27 2.76E-04

For Julian Day 243, selecting COMIDA2 results # 7 of 9
 133 243 15 24 1.14E-04

For Julian Day 243, selecting COMIDA2 results # 7 of 9
 134 243 17 26 2.95E-04

For Julian Day 243, selecting COMIDA2 results # 7 of 9
 135 243 21 25 3.04E-04

For Julian Day 243, selecting COMIDA2 results # 7 of 9
 136 243 23 24 1.14E-04

For Julian Day 243, selecting COMIDA2 results # 7 of 9
 137 245 7 15 2.97E-03

For Julian Day 245, selecting COMIDA2 results # 7 of 9
 138 248 3 14 2.25E-03

For Julian Day 248, selecting COMIDA2 results # 7 of 9
 139 250 15 6 1.22E-02

For Julian Day 250, selecting COMIDA2 results # 7 of 9
 140 251 10 1 2.47E-04

For Julian Day 251, selecting COMIDA2 results # 7 of 9
 141 253 2 8 2.64E-03

For Julian Day 253, selecting COMIDA2 results # 7 of 9
 142 253 4 25 3.04E-04

For Julian Day 253, selecting COMIDA2 results # 7 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-132 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related
143	254	4	12 1.27E-02
For Julian Day 254,	selecting	COMIDA2	results # 7 of 9
144	254	24	14 2.25E-03
For Julian Day 254,	selecting	COMIDA2	results # 7 of 9
145	255	13	5 6.36E-03
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9
146	255	14	4 3.11E-03
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9
147	260	5	3 3.14E-04
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9
148	260	10	1 2.47E-04
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9
149	263	14	2 3.82E-03
For Julian Day 263,	selecting	COMIDA2	results # 8 of 9
150	264	13	5 6.36E-03
For Julian Day 264,	selecting	COMIDA2	results # 8 of 9

TRIAL	DAY	HOUR	BIN	PRBMET
151	266	7	16	3.17E-03
For Julian Day 266,	selecting	COMIDA2	results # 8 of 9	
152	269	8	9	8.75E-04
For Julian Day 269,	selecting	COMIDA2	results # 8 of 9	
153	269	13	1	2.47E-04
For Julian Day 269,	selecting	COMIDA2	results # 8 of 9	
154	270	21	9	8.75E-04
For Julian Day 270,	selecting	COMIDA2	results # 8 of 9	
155	271	8	13	4.57E-04
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9	
156	271	17	21	2.40E-03
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9	
157	271	20	20	3.17E-03
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9	
158	271	24	18	4.00E-04
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9	



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-133 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

159	272	2	31	2.85E-04			
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9			
160	272	3	30	2.57E-04			
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9			
161	272	6	29	1.14E-04			
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9			
162	272	9	36	2.19E-04			
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9			
163	272	11	35	2.47E-04			
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9			
164	272	13	34	1.14E-04			
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9			
165	272	15	32	3.61E-04			
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9			
166	272	21	32	3.61E-04			
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9			
167	274	20	11	6.66E-03			
For Julian Day 274,	selecting	COMIDA2	results #	8 of 9			
168	274	21	15	2.97E-03			
For Julian Day 274,	selecting	COMIDA2	results #	8 of 9			
169	275	10	4	3.11E-03			
For Julian Day 275,	selecting	COMIDA2	results #	8 of 9			
170	276	3	21	2.40E-03			
For Julian Day 276,	selecting	COMIDA2	results #	8 of 9			
171	276	18	10	4.33E-03			
For Julian Day 276,	selecting	COMIDA2	results #	8 of 9			
172	277	17	3	3.14E-04			
For Julian Day 277,	selecting	COMIDA2	results #	8 of 9			
173	278	12	1	2.47E-04			
For Julian Day 278,	selecting	COMIDA2	results #	8 of 9			
174	280	9	4	3.11E-03			
For Julian Day 280,	selecting	COMIDA2	results #	8 of 9			
175	281	21	10	4.33E-03			
For Julian Day 281,	selecting	COMIDA2	results #	8 of 9			
176	281	24	13	4.57E-04			



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-134 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 281, selecting COMIDA2 results # 8 of 9
 177 282 6 13 4.57E-04

For Julian Day 282, selecting COMIDA2 results # 8 of 9
 178 282 7 13 4.57E-04

For Julian Day 282, selecting COMIDA2 results # 8 of 9
 179 282 8 9 8.75E-04

For Julian Day 282, selecting COMIDA2 results # 8 of 9
 180 285 8 7 7.65E-03

For Julian Day 285, selecting COMIDA2 results # 8 of 9
 181 285 14 2 3.82E-03

For Julian Day 285, selecting COMIDA2 results # 8 of 9
 182 289 23 12 1.27E-02

For Julian Day 289, selecting COMIDA2 results # 9 of 9
 183 292 21 19 9.51E-04

For Julian Day 292, selecting COMIDA2 results # 9 of 9
 184 292 24 27 2.76E-04

For Julian Day 292, selecting COMIDA2 results # 9 of 9
 185 293 1 32 3.61E-04

For Julian Day 293, selecting COMIDA2 results # 9 of 9
 186 293 3 17 3.45E-03

For Julian Day 293, selecting COMIDA2 results # 9 of 9
 187 297 22 15 2.97E-03

For Julian Day 297, selecting COMIDA2 results # 9 of 9
 188 299 7 10 4.33E-03

For Julian Day 299, selecting COMIDA2 results # 9 of 9
 189 299 18 3 3.14E-04

For Julian Day 299, selecting COMIDA2 results # 9 of 9
 190 300 3 11 6.66E-03

For Julian Day 300, selecting COMIDA2 results # 9 of 9
 191 300 16 6 1.22E-02

For Julian Day 300, selecting COMIDA2 results # 9 of 9
 192 301 20 14 2.25E-03

For Julian Day 301, selecting COMIDA2 results # 9 of 9
 193 302 14 5 6.36E-03

For Julian Day 302, selecting COMIDA2 results # 9 of 9

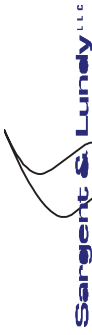


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-135 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related		
194	304		6	24	1.14E-04
For Julian Day 304,	selecting		COMIDA2	results #	9 of 9
195	309		9	18	4.00E-04
For Julian Day 309,	selecting		COMIDA2	results #	9 of 9
196	309		16	22	7.23E-04
For Julian Day 309,	selecting		COMIDA2	results #	9 of 9
197	313		1	16	3.17E-03
For Julian Day 313,	selecting		COMIDA2	results #	9 of 9
198	314		2	12	1.27E-02
For Julian Day 314,	selecting		COMIDA2	results #	9 of 9
199	315		2	31	2.85E-04
For Julian Day 315,	selecting		COMIDA2	results #	9 of 9
200	315		5	31	2.85E-04
For Julian Day 315,	selecting		COMIDA2	results #	9 of 9
201	315		7	30	2.57E-04
For Julian Day 315,	selecting		COMIDA2	results #	9 of 9
202	315		9	30	2.57E-04
For Julian Day 315,	selecting		COMIDA2	results #	9 of 9
203	315		10	29	1.14E-04
For Julian Day 315,	selecting		COMIDA2	results #	9 of 9
204	315		11	28	1.14E-04
For Julian Day 315,	selecting		COMIDA2	results #	9 of 9
205	315		12	27	2.76E-04
For Julian Day 315,	selecting		COMIDA2	results #	9 of 9
206	317		20	22	7.23E-04
For Julian Day 317,	selecting		COMIDA2	results #	9 of 9
207	318		6	7	7.65E-03
For Julian Day 318,	selecting		COMIDA2	results #	9 of 9
208	321		22	14	2.25E-03
For Julian Day 321,	selecting		COMIDA2	results #	9 of 9
209	323		11	11	6.66E-03
For Julian Day 323,	selecting		COMIDA2	results #	9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-136 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

210	324	4	13	4.57E-04
For Julian Day 324,	selecting	COMIDA2	results #	9 of 9
211	324	18	9	8.75E-04
For Julian Day 324,	selecting	COMIDA2	results #	9 of 9
212	324	21	13	4.57E-04
For Julian Day 324,	selecting	COMIDA2	results #	9 of 9
213	325	18	24	1.14E-04
For Julian Day 325,	selecting	COMIDA2	results #	9 of 9
214	325	19	23	1.14E-04
For Julian Day 325,	selecting	COMIDA2	results #	9 of 9
215	326	8	5	6.36E-03
For Julian Day 326,	selecting	COMIDA2	results #	9 of 9
216	326	17	21	2.40E-03
For Julian Day 326,	selecting	COMIDA2	results #	9 of 9
217	326	21	20	3.17E-03
For Julian Day 326,	selecting	COMIDA2	results #	9 of 9
218	327	3	19	9.51E-04
For Julian Day 327,	selecting	COMIDA2	results #	9 of 9
219	327	18	17	3.45E-03
For Julian Day 327,	selecting	COMIDA2	results #	9 of 9
220	328	13	4	3.11E-03
For Julian Day 328,	selecting	COMIDA2	results #	9 of 9
221	328	24	21	2.40E-03
For Julian Day 328,	selecting	COMIDA2	results #	9 of 9
222	330	20	8	2.64E-03
For Julian Day 330,	selecting	COMIDA2	results #	9 of 9
223	331	17	6	1.22E-02
For Julian Day 331,	selecting	COMIDA2	results #	9 of 9
224	333	5	32	3.61E-04
For Julian Day 333,	selecting	COMIDA2	results #	9 of 9
225	333	6	27	2.76E-04
For Julian Day 333,	selecting	COMIDA2	results #	9 of 9
226	333	8	17	3.45E-03
For Julian Day 333,	selecting	COMIDA2	results #	9 of 9
227	335	4	9	8.75E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-137 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 335, selecting COMIDA2 results # 1 of 9
 228 335 7 15 2.97E-03

For Julian Day 335, selecting COMIDA2 results # 1 of 9
 229 336 1 20 3.17E-03

For Julian Day 336, selecting COMIDA2 results # 1 of 9
 230 336 15 8 2.64E-03

For Julian Day 336, selecting COMIDA2 results # 1 of 9
 231 338 1 14 2.25E-03

For Julian Day 338, selecting COMIDA2 results # 1 of 9
 232 338 8 12 1.27E-02

For Julian Day 338, selecting COMIDA2 results # 1 of 9
 233 342 8 22 7.23E-04

For Julian Day 342, selecting COMIDA2 results # 1 of 9
 234 342 11 18 4.00E-04

For Julian Day 342, selecting COMIDA2 results # 1 of 9
 235 343 18 16 3.17E-03

For Julian Day 343, selecting COMIDA2 results # 1 of 9
 236 344 4 26 2.95E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 237 344 8 26 2.95E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 238 344 10 25 3.04E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 239 344 13 25 3.04E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 240 344 14 24 1.14E-04

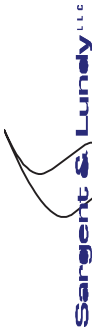
For Julian Day 344, selecting COMIDA2 results # 1 of 9
 241 344 15 23 1.14E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 242 345 8 19 9.51E-04

For Julian Day 345, selecting COMIDA2 results # 1 of 9
 243 345 21 14 2.25E-03

For Julian Day 345, selecting COMIDA2 results # 1 of 9
 244 346 10 18 4.00E-04

For Julian Day 346, selecting COMIDA2 results # 1 of 9



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

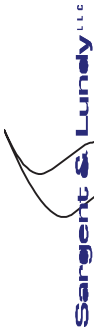
Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-138 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

245	349	14	2	3.82E-03
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9	
246	349	17	7	7.65E-03
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9	
247	350	24	11	6.66E-03
For Julian Day 350,	selecting	COMIDA2	results # 1 of 9	
248	352	22	10	4.33E-03
For Julian Day 352,	selecting	COMIDA2	results # 1 of 9	
249	353	17	10	4.33E-03
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9	
250	353	24	21	2.40E-03
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9	
251	356	21	15	2.97E-03
For Julian Day 356,	selecting	COMIDA2	results # 1 of 9	PRBMET
252	358	6	16	3.17E-03
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9	
253	358	22	12	1.27E-02
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9	
254	363	22	7	7.65E-03
For Julian Day 363,	selecting	COMIDA2	results # 1 of 9	
255	365	4	13	4.57E-04
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9	
256	365	9	13	4.57E-04
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9	
257	2	7	19	9.51E-04
For Julian Day 2,	selecting	COMIDA2	results # 1 of 9	
258	3	11	14	2.25E-03
For Julian Day 3,	selecting	COMIDA2	results # 1 of 9	
259	5	19	11	6.66E-03
For Julian Day 5,	selecting	COMIDA2	results # 1 of 9	
260	6	9	6	1.22E-02
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9	



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-139 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

261	For Julian Day 6,	6	17	8	2.64E-03
262	selecting COMIDA2 results # 1 of 9	10	13	2	3.82E-03
263	For Julian Day 10,	13	10	20	3.17E-03
264	selecting COMIDA2 results # 1 of 9	16	2	8	2.64E-03
265	For Julian Day 16,	16	20	7	7.65E-03
266	selecting COMIDA2 results # 1 of 9	18	10	17	3.45E-03
267	For Julian Day 18,	19	10	8	2.64E-03
268	selecting COMIDA2 results # 1 of 9	20	9	6	1.22E-02
269	For Julian Day 20,	23	1	8	2.64E-03
270	selecting COMIDA2 results # 1 of 9	24	4	3	3.14E-04
271	For Julian Day 24,	24	15	7	7.65E-03
272	selecting COMIDA2 results # 1 of 9	25	14	20	3.17E-03
273	For Julian Day 25,	25	20	19	9.51E-04
274	selecting COMIDA2 results # 1 of 9	25	21	18	4.00E-04
275	For Julian Day 25,	26	2	17	3.45E-03
276	selecting COMIDA2 results # 1 of 9	33	17	9	8.75E-04
277	For Julian Day 33,	33	19	15	2.97E-03
278	selecting COMIDA2 results # 2 of 9	36	23	18	4.00E-04



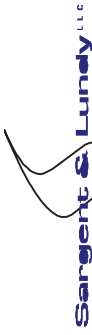
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-140 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 279	36, selecting	COMIDA2	results # 2	of 9
280	37	17	22	7.23E-04
281	37,	selecting	COMIDA2	results # 2
282	39	17	6	1.22E-02
283	39,	selecting	COMIDA2	results # 2
284	40	22	16	3.17E-03
285	40,	selecting	COMIDA2	results # 2
286	42	5	12	1.27E-02
287	42,	selecting	COMIDA2	results # 2
288	42	23	13	4.57E-04
289	42,	selecting	COMIDA2	results # 2
290	43	8	9	8.75E-04
291	43,	selecting	COMIDA2	results # 2
292	44	6	11	6.66E-03
293	44,	selecting	COMIDA2	results # 2
294	44	22	15	2.97E-03
295	44,	selecting	COMIDA2	results # 2
296	46	20	12	1.27E-02
297	46,	selecting	COMIDA2	results # 2
298	47	11	2	3.82E-03
299	47,	selecting	COMIDA2	results # 2
300	47	17	5	6.36E-03
301	47,	selecting	COMIDA2	results # 2
302	48	1	14	2.25E-03
303	48,	selecting	COMIDA2	results # 2
304	48	14	4	3.11E-03
305	48,	selecting	COMIDA2	results # 2
306	53	13	2	3.82E-03
307	53,	selecting	COMIDA2	results # 2
308	53	17	7	7.65E-03
309	53,	selecting	COMIDA2	results # 2
310	55	5	21	2.40E-03
311	55,	selecting	COMIDA2	results # 2
312	62	9	16	3.17E-03
313	62,	selecting	COMIDA2	results # 2



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

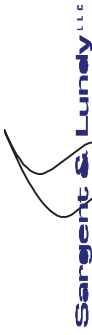
Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-141 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001 Equip. No.	Approved by
	Date
	Date
	Date

296	For Julian Day 62,	23	16	3.17E-03	
297	62, selecting COMIDA2 results # 2 of 9	19	14	2.25E-03	
298	63, selecting COMIDA2 results # 2 of 9	1	15	2.97E-03	
299	64, selecting COMIDA2 results # 2 of 9	15	5	6.36E-03	
300	64, selecting COMIDA2 results # 2 of 9	6	27	2.76E-04	
	For Julian Day 66, selecting COMIDA2 results # 2 of 9				

TRIAL	DAY	HOUR	BIN	PRBMET	
301	66	7	32	3.61E-04	
	For Julian Day 66, selecting COMIDA2 results # 2 of 9				
302	66	8	22	7.23E-04	
	For Julian Day 66, selecting COMIDA2 results # 2 of 9				
303	66	12	35	2.47E-04	
	For Julian Day 66, selecting COMIDA2 results # 2 of 9				
304	68	19	10	4.33E-03	
	For Julian Day 68, selecting COMIDA2 results # 2 of 9				
305	69	15	1	2.47E-04	
	For Julian Day 69, selecting COMIDA2 results # 2 of 9				
306	72	11	2	3.82E-03	
	For Julian Day 72, selecting COMIDA2 results # 2 of 9				
307	74	8	10	4.33E-03	
	For Julian Day 74, selecting COMIDA2 results # 2 of 9				
308	75	24	21	2.40E-03	
	For Julian Day 75, selecting COMIDA2 results # 2 of 9				
309	76	6	19	9.51E-04	
	For Julian Day 76, selecting COMIDA2 results # 2 of 9				
310	78	6	3	3.14E-04	
	For Julian Day 78, selecting COMIDA2 results # 2 of 9				
311	79	2	22	7.23E-04	
	For Julian Day 79, selecting COMIDA2 results # 2 of 9				

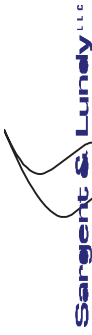


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-142 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

312	79	6	17	3.45E-03			
For Julian Day	79,	selecting	COMIDA2	results # 2 of 9			
313	80	2	11	6.66E-03			
For Julian Day	80,	selecting	COMIDA2	results # 2 of 9			
314	80	5	13	4.57E-04			
For Julian Day	80,	selecting	COMIDA2	results # 2 of 9			
315	81	19	8	2.64E-03			
For Julian Day	81,	selecting	COMIDA2	results # 2 of 9			
316	84	24	18	4.00E-04			
For Julian Day	84,	selecting	COMIDA2	results # 2 of 9			
317	85	3	17	3.45E-03			
For Julian Day	85,	selecting	COMIDA2	results # 2 of 9			
318	86	13	12	1.27E-02			
For Julian Day	86,	selecting	COMIDA2	results # 2 of 9			
319	87	7	20	3.17E-03			
For Julian Day	87,	selecting	COMIDA2	results # 2 of 9			
320	89	13	1	2.47E-04			
For Julian Day	89,	selecting	COMIDA2	results # 2 of 9			
321	90	19	19	9.51E-04			
For Julian Day	90,	selecting	COMIDA2	results # 2 of 9			
322	91	2	20	3.17E-03			
For Julian Day	91,	selecting	COMIDA2	results # 2 of 9			
323	94	1	19	9.51E-04			
For Julian Day	94,	selecting	COMIDA2	results # 3 of 9			
324	95	20	8	2.64E-03			
For Julian Day	95,	selecting	COMIDA2	results # 3 of 9			
325	96	21	12	1.27E-02			
For Julian Day	96,	selecting	COMIDA2	results # 3 of 9			
326	97	11	2	3.82E-03			
For Julian Day	97,	selecting	COMIDA2	results # 3 of 9			
327	97	24	15	2.97E-03			
For Julian Day	97,	selecting	COMIDA2	results # 3 of 9			
328	98	5	14	2.25E-03			
For Julian Day	98,	selecting	COMIDA2	results # 3 of 9			
329	98	8	15	2.97E-03			



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related	
----------------	---	--------------------	--

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-143 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 98,	98	selecting	COMIDA2	results	# 3 of 9
330	13	2	3.82E-03		
For Julian Day 98,	98	selecting	COMIDA2	results	# 3 of 9
331	8	21	2.40E-03		
For Julian Day 99,	99	selecting	COMIDA2	results	# 3 of 9
332	23	18	4.00E-04		
For Julian Day 99,	99	selecting	COMIDA2	results	# 3 of 9
333	100	19	6	1.22E-02	
For Julian Day 100,	100	selecting	COMIDA2	results	# 3 of 9
334	100	22	16	3.17E-03	
For Julian Day 100,	100	selecting	COMIDA2	results	# 3 of 9
335	102	8	20	3.17E-03	
For Julian Day 102,	102	selecting	COMIDA2	results	# 3 of 9
336	102	12	7	7.65E-03	
For Julian Day 102,	102	selecting	COMIDA2	results	# 3 of 9
337	104	14	35	2.47E-04	
For Julian Day 104,	104	selecting	COMIDA2	results	# 3 of 9
338	104	17	22	7.23E-04	
For Julian Day 104,	104	selecting	COMIDA2	results	# 3 of 9
339	104	19	32	3.61E-04	
For Julian Day 104,	104	selecting	COMIDA2	results	# 3 of 9
340	105	2	21	2.40E-03	
For Julian Day 105,	105	selecting	COMIDA2	results	# 3 of 9
341	105	12	17	3.45E-03	
For Julian Day 105,	105	selecting	COMIDA2	results	# 3 of 9
342	105	14	26	2.95E-04	
For Julian Day 105,	105	selecting	COMIDA2	results	# 3 of 9
343	107	11	1	2.47E-04	
For Julian Day 107,	107	selecting	COMIDA2	results	# 3 of 9
344	107	13	1	2.47E-04	
For Julian Day 107,	107	selecting	COMIDA2	results	# 3 of 9
345	109	18	16	3.17E-03	
For Julian Day 109,	109	selecting	COMIDA2	results	# 3 of 9
346	110	3	13	4.57E-04	
For Julian Day 110,	110	selecting	COMIDA2	results	# 3 of 9



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

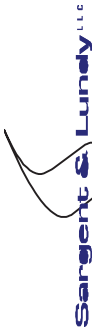
Safety Related X Non-Safety Related

Page 1.4-144 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

347 110 7 14 2.25E-03
 For Julian Day 110, selecting COMIDA2 results # 3 of 9
 348 112 7 5 6.36E-03
 For Julian Day 112, selecting COMIDA2 results # 3 of 9
 349 114 2 9 8.75E-04
 For Julian Day 114, selecting COMIDA2 results # 3 of 9
 350 114 14 31 2.85E-04
 For Julian Day 114, selecting COMIDA2 results # 3 of 9

TRIAL	DAY	HOUR	BIN	PRBMET
351	114	15	31	2.85E-04
For Julian Day 114, selecting COMIDA2 results # 3 of 9				
352	114	18	30	2.57E-04
For Julian Day 114, selecting COMIDA2 results # 3 of 9				
353	114	19	29	1.14E-04
For Julian Day 114, selecting COMIDA2 results # 3 of 9				
354	114	20	27	2.76E-04
For Julian Day 114, selecting COMIDA2 results # 3 of 9				
355	114	24	4	3.11E-03
For Julian Day 114, selecting COMIDA2 results # 3 of 9				
356	116	22	8	2.64E-03
For Julian Day 116, selecting COMIDA2 results # 3 of 9				
357	117	1	25	3.04E-04
For Julian Day 117, selecting COMIDA2 results # 3 of 9				
358	117	17	22	7.23E-04
For Julian Day 117, selecting COMIDA2 results # 3 of 9				
359	123	18	16	3.17E-03
For Julian Day 123, selecting COMIDA2 results # 3 of 9				
360	124	6	17	3.45E-03
For Julian Day 124, selecting COMIDA2 results # 3 of 9				
361	124	10	20	3.17E-03
For Julian Day 124, selecting COMIDA2 results # 3 of 9				
362	125	15	2	3.82E-03
For Julian Day 125, selecting COMIDA2 results # 3 of 9				



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-145 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	Safety Related	Non-Safety Related		

363	125	17	6	1.22E-02
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9	
364	127	11	1	2.47E-04
For Julian Day 127,	selecting	COMIDA2	results # 3 of 9	
365	128	11	21	2.40E-03
For Julian Day 128,	selecting	COMIDA2	results # 3 of 9	
366	128	14	18	4.00E-04
For Julian Day 128,	selecting	COMIDA2	results # 3 of 9	
367	130	17	36	2.19E-04
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9	
368	130	19	35	2.47E-04
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9	
369	130	22	35	2.47E-04
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9	
370	130	23	34	1.14E-04
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9	
371	131	1	34	1.14E-04
For Julian Day 131,	selecting	COMIDA2	results # 3 of 9	
372	132	5	10	4.33E-03
For Julian Day 132,	selecting	COMIDA2	results # 3 of 9	
373	132	23	31	2.85E-04
For Julian Day 132,	selecting	COMIDA2	results # 3 of 9	
374	133	2	31	2.85E-04
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9	
375	133	4	30	2.57E-04
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9	
376	133	8	30	2.57E-04
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9	
377	133	9	29	1.14E-04
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9	
378	133	10	28	1.14E-04
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9	
379	137	9	3	3.14E-04
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9	
380	137	21	11	6.66E-03



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 137, selecting COMIDA2 results # 4 of 9
 381 141 15 2 3.82E-03
 For Julian Day 141, selecting COMIDA2 results # 4 of 9
 382 142 18 4 3.11E-03
 For Julian Day 142, selecting COMIDA2 results # 4 of 9
 383 142 21 12 1.27E-02
 For Julian Day 142, selecting COMIDA2 results # 4 of 9
 384 143 19 15 2.97E-03
 For Julian Day 143, selecting COMIDA2 results # 4 of 9
 385 144 22 16 3.17E-03
 For Julian Day 144, selecting COMIDA2 results # 4 of 9
 386 146 15 7 7.65E-03
 For Julian Day 146, selecting COMIDA2 results # 4 of 9
 387 146 21 27 2.76E-04
 For Julian Day 146, selecting COMIDA2 results # 4 of 9
 388 147 5 19 9.51E-04
 For Julian Day 147, selecting COMIDA2 results # 4 of 9
 389 148 13 1 2.47E-04
 For Julian Day 148, selecting COMIDA2 results # 4 of 9
 390 149 10 5 6.36E-03
 For Julian Day 149, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 154, selecting COMIDA2 results # 4 of 9
 For Julian Day 155, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9



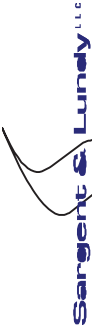
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-148 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 174,	selecting COMIDA2 results	# 5 of 9
For Julian Day 174,	selecting COMIDA2 results	# 5 of 9
For Julian Day 174,	selecting COMIDA2 results	# 5 of 9
For Julian Day 177,	selecting COMIDA2 results	# 5 of 9
For Julian Day 177,	selecting COMIDA2 results	# 5 of 9
For Julian Day 177,	selecting COMIDA2 results	# 5 of 9
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 185,	selecting COMIDA2 results	# 5 of 9
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 189,	selecting COMIDA2 results	# 5 of 9
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 198,	selecting COMIDA2 results	# 6 of 9
For Julian Day 200,	selecting COMIDA2 results	# 6 of 9
For Julian Day 202,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 206,	selecting COMIDA2 results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-149 of 1.4-801

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

For Julian Day 209,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 209,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 209,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 209,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 210,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 210,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 210,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 210,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 210,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 211,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 215,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 215,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 216,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 216,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 217,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 217,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 217,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 217,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 217,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 217,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 217,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 217,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 218,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 218,	selecting	COMIDA2	results	#	6 of 9
For Julian Day 223,	selecting	COMIDA2	results	#	7 of 9
For Julian Day 224,	selecting	COMIDA2	results	#	7 of 9
For Julian Day 226,	selecting	COMIDA2	results	#	7 of 9
For Julian Day 226,	selecting	COMIDA2	results	#	7 of 9
For Julian Day 226,	selecting	COMIDA2	results	#	7 of 9
For Julian Day 226,	selecting	COMIDA2	results	#	7 of 9
For Julian Day 227,	selecting	COMIDA2	results	#	7 of 9
For Julian Day 228,	selecting	COMIDA2	results	#	7 of 9
For Julian Day 228,	selecting	COMIDA2	results	#	7 of 9
For Julian Day 228,	selecting	COMIDA2	results	#	7 of 9
For Julian Day 229,	selecting	COMIDA2	results	#	7 of 9
For Julian Day 230,	selecting	COMIDA2	results	#	7 of 9
For Julian Day 230,	selecting	COMIDA2	results	#	7 of 9
For Julian Day 230,	selecting	COMIDA2	results	#	7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-150 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting	COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-152 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
	Date
	Date
	Date

Proj. No	Equip. No.	Safety Related	X	Non-Safety Related
For Julian Day 300,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 300,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 301,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 302,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 304,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 309,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 309,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 313,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 314,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 315,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 315,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 315,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 315,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 315,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 315,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 315,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 315,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 315,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 315,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 317,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 318,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 321,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 323,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 324,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 324,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 324,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 325,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 325,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 326,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 326,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 326,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 327,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 327,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 328,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 328,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 330,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 331,	selecting	COMIDA2 results	#	9 of 9
For Julian Day 333,	selecting	COMIDA2 results	#	9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-153 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev. 2 Date

Page 1.4-154 of 1.4-801

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

	Safety Related	Non-Safety Related		
For Julian Day 6,	selecting COMIDA2 results # 1 of 9			
For Julian Day 6,	selecting COMIDA2 results # 1 of 9			
For Julian Day 10,	selecting COMIDA2 results # 1 of 9			
For Julian Day 13,	selecting COMIDA2 results # 1 of 9			
For Julian Day 16,	selecting COMIDA2 results # 1 of 9			
For Julian Day 16,	selecting COMIDA2 results # 1 of 9			
For Julian Day 18,	selecting COMIDA2 results # 1 of 9			
For Julian Day 19,	selecting COMIDA2 results # 1 of 9			
For Julian Day 20,	selecting COMIDA2 results # 1 of 9			
For Julian Day 23,	selecting COMIDA2 results # 1 of 9			
For Julian Day 24,	selecting COMIDA2 results # 1 of 9			
For Julian Day 24,	selecting COMIDA2 results # 1 of 9			
For Julian Day 25,	selecting COMIDA2 results # 1 of 9			
For Julian Day 25,	selecting COMIDA2 results # 1 of 9			
For Julian Day 25,	selecting COMIDA2 results # 1 of 9			
For Julian Day 26,	selecting COMIDA2 results # 1 of 9			
For Julian Day 33,	selecting COMIDA2 results # 2 of 9			
For Julian Day 33,	selecting COMIDA2 results # 2 of 9			
For Julian Day 36,	selecting COMIDA2 results # 2 of 9			
For Julian Day 37,	selecting COMIDA2 results # 2 of 9			
For Julian Day 39,	selecting COMIDA2 results # 2 of 9			
For Julian Day 40,	selecting COMIDA2 results # 2 of 9			
For Julian Day 42,	selecting COMIDA2 results # 2 of 9			
For Julian Day 42,	selecting COMIDA2 results # 2 of 9			
For Julian Day 43,	selecting COMIDA2 results # 2 of 9			
For Julian Day 44,	selecting COMIDA2 results # 2 of 9			
For Julian Day 44,	selecting COMIDA2 results # 2 of 9			
For Julian Day 46,	selecting COMIDA2 results # 2 of 9			
For Julian Day 47,	selecting COMIDA2 results # 2 of 9			
For Julian Day 47,	selecting COMIDA2 results # 2 of 9			
For Julian Day 48,	selecting COMIDA2 results # 2 of 9			
For Julian Day 48,	selecting COMIDA2 results # 2 of 9			
For Julian Day 53,	selecting COMIDA2 results # 2 of 9			
For Julian Day 53,	selecting COMIDA2 results # 2 of 9			
For Julian Day 55,	selecting COMIDA2 results # 2 of 9			



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-155 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 62,	selecting COMIDA2 results	# 2 of 9
For Julian Day 62,	selecting COMIDA2 results	# 2 of 9
For Julian Day 63,	selecting COMIDA2 results	# 2 of 9
For Julian Day 64,	selecting COMIDA2 results	# 2 of 9
For Julian Day 64,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 68,	selecting COMIDA2 results	# 2 of 9
For Julian Day 69,	selecting COMIDA2 results	# 2 of 9
For Julian Day 72,	selecting COMIDA2 results	# 2 of 9
For Julian Day 74,	selecting COMIDA2 results	# 2 of 9
For Julian Day 75,	selecting COMIDA2 results	# 2 of 9
For Julian Day 76,	selecting COMIDA2 results	# 2 of 9
For Julian Day 78,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 81,	selecting COMIDA2 results	# 2 of 9
For Julian Day 84,	selecting COMIDA2 results	# 2 of 9
For Julian Day 85,	selecting COMIDA2 results	# 2 of 9
For Julian Day 86,	selecting COMIDA2 results	# 2 of 9
For Julian Day 87,	selecting COMIDA2 results	# 2 of 9
For Julian Day 89,	selecting COMIDA2 results	# 2 of 9
For Julian Day 90,	selecting COMIDA2 results	# 2 of 9
For Julian Day 91,	selecting COMIDA2 results	# 2 of 9
For Julian Day 94,	selecting COMIDA2 results	# 3 of 9
For Julian Day 95,	selecting COMIDA2 results	# 3 of 9
For Julian Day 96,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-156 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 98,	selecting	COMIDA2	results # 3 of 9
For Julian Day 99,	selecting	COMIDA2	results # 3 of 9
For Julian Day 99,	selecting	COMIDA2	results # 3 of 9
For Julian Day 100,	selecting	COMIDA2	results # 3 of 9
For Julian Day 100,	selecting	COMIDA2	results # 3 of 9
For Julian Day 102,	selecting	COMIDA2	results # 3 of 9
For Julian Day 102,	selecting	COMIDA2	results # 3 of 9
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9
For Julian Day 107,	selecting	COMIDA2	results # 3 of 9
For Julian Day 107,	selecting	COMIDA2	results # 3 of 9
For Julian Day 109,	selecting	COMIDA2	results # 3 of 9
For Julian Day 110,	selecting	COMIDA2	results # 3 of 9
For Julian Day 110,	selecting	COMIDA2	results # 3 of 9
For Julian Day 112,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 116,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 123,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 127,	selecting	COMIDA2	results # 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No.	2009-11222
Rev.	2
Page	1.4-157 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 154,	selecting COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-159 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting	COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-160 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-163 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 297,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 301,	selecting	COMIDA2	results # 9 of 9
For Julian Day 302,	selecting	COMIDA2	results # 9 of 9
For Julian Day 304,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 313,	selecting	COMIDA2	results # 9 of 9
For Julian Day 314,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 317,	selecting	COMIDA2	results # 9 of 9
For Julian Day 318,	selecting	COMIDA2	results # 9 of 9
For Julian Day 321,	selecting	COMIDA2	results # 9 of 9
For Julian Day 323,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 325,	selecting	COMIDA2	results # 9 of 9
For Julian Day 325,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 327,	selecting	COMIDA2	results # 9 of 9
For Julian Day 327,	selecting	COMIDA2	results # 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-164 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-165 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-166 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 48,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3	of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3	of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-167 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 96,	selecting COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 109,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-168 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 124,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 137,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	<input checked="" type="checkbox"/> Non-Safety Related
----------------	--

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-169 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 153,	selecting COMIDA2 results	# 4 of 9
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9
For Julian Day 154,	selecting COMIDA2 results	# 4 of 9
For Julian Day 155,	selecting COMIDA2 results	# 4 of 9
For Julian Day 156,	selecting COMIDA2 results	# 4 of 9
For Julian Day 156,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 158,	selecting COMIDA2 results	# 4 of 9
For Julian Day 159,	selecting COMIDA2 results	# 4 of 9
For Julian Day 159,	selecting COMIDA2 results	# 4 of 9
For Julian Day 160,	selecting COMIDA2 results	# 4 of 9
For Julian Day 160,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9
For Julian Day 163,	selecting COMIDA2 results	# 4 of 9
For Julian Day 163,	selecting COMIDA2 results	# 4 of 9
For Julian Day 166,	selecting COMIDA2 results	# 4 of 9
For Julian Day 166,	selecting COMIDA2 results	# 4 of 9
For Julian Day 166,	selecting COMIDA2 results	# 4 of 9
For Julian Day 166,	selecting COMIDA2 results	# 4 of 9
For Julian Day 167,	selecting COMIDA2 results	# 5 of 9
For Julian Day 167,	selecting COMIDA2 results	# 5 of 9
For Julian Day 168,	selecting COMIDA2 results	# 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-171 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date
Equip. No.		

For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-172 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 229,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-173 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 255,	selecting COMIDA2	results # 7 of 9	
For Julian Day 255,	selecting COMIDA2	results # 7 of 9	
For Julian Day 260,	selecting COMIDA2	results # 8 of 9	
For Julian Day 260,	selecting COMIDA2	results # 8 of 9	
For Julian Day 263,	selecting COMIDA2	results # 8 of 9	
For Julian Day 264,	selecting COMIDA2	results # 8 of 9	
For Julian Day 266,	selecting COMIDA2	results # 8 of 9	
For Julian Day 269,	selecting COMIDA2	results # 8 of 9	
For Julian Day 269,	selecting COMIDA2	results # 8 of 9	
For Julian Day 270,	selecting COMIDA2	results # 8 of 9	
For Julian Day 271,	selecting COMIDA2	results # 8 of 9	
For Julian Day 271,	selecting COMIDA2	results # 8 of 9	
For Julian Day 271,	selecting COMIDA2	results # 8 of 9	
For Julian Day 271,	selecting COMIDA2	results # 8 of 9	
For Julian Day 272,	selecting COMIDA2	results # 8 of 9	
For Julian Day 272,	selecting COMIDA2	results # 8 of 9	
For Julian Day 272,	selecting COMIDA2	results # 8 of 9	
For Julian Day 272,	selecting COMIDA2	results # 8 of 9	
For Julian Day 272,	selecting COMIDA2	results # 8 of 9	
For Julian Day 272,	selecting COMIDA2	results # 8 of 9	
For Julian Day 272,	selecting COMIDA2	results # 8 of 9	
For Julian Day 274,	selecting COMIDA2	results # 8 of 9	
For Julian Day 274,	selecting COMIDA2	results # 8 of 9	
For Julian Day 275,	selecting COMIDA2	results # 8 of 9	
For Julian Day 276,	selecting COMIDA2	results # 8 of 9	
For Julian Day 276,	selecting COMIDA2	results # 8 of 9	
For Julian Day 277,	selecting COMIDA2	results # 8 of 9	
For Julian Day 278,	selecting COMIDA2	results # 8 of 9	
For Julian Day 280,	selecting COMIDA2	results # 8 of 9	
For Julian Day 281,	selecting COMIDA2	results # 8 of 9	
For Julian Day 281,	selecting COMIDA2	results # 8 of 9	
For Julian Day 282,	selecting COMIDA2	results # 8 of 9	
For Julian Day 282,	selecting COMIDA2	results # 8 of 9	
For Julian Day 282,	selecting COMIDA2	results # 8 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-174 of 1.4-801

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 285, selecting COMIDA2 results # 8 of 9
 For Julian Day 285, selecting COMIDA2 results # 8 of 9
 For Julian Day 289, selecting COMIDA2 results # 9 of 9
 For Julian Day 292, selecting COMIDA2 results # 9 of 9
 For Julian Day 292, selecting COMIDA2 results # 9 of 9
 For Julian Day 293, selecting COMIDA2 results # 9 of 9
 For Julian Day 293, selecting COMIDA2 results # 9 of 9
 For Julian Day 297, selecting COMIDA2 results # 9 of 9
 For Julian Day 299, selecting COMIDA2 results # 9 of 9
 For Julian Day 299, selecting COMIDA2 results # 9 of 9
 For Julian Day 300, selecting COMIDA2 results # 9 of 9
 For Julian Day 300, selecting COMIDA2 results # 9 of 9
 For Julian Day 301, selecting COMIDA2 results # 9 of 9
 For Julian Day 302, selecting COMIDA2 results # 9 of 9
 For Julian Day 304, selecting COMIDA2 results # 9 of 9
 For Julian Day 309, selecting COMIDA2 results # 9 of 9
 For Julian Day 309, selecting COMIDA2 results # 9 of 9
 For Julian Day 313, selecting COMIDA2 results # 9 of 9
 For Julian Day 314, selecting COMIDA2 results # 9 of 9
 For Julian Day 315, selecting COMIDA2 results # 9 of 9
 For Julian Day 315, selecting COMIDA2 results # 9 of 9
 For Julian Day 315, selecting COMIDA2 results # 9 of 9
 For Julian Day 315, selecting COMIDA2 results # 9 of 9
 For Julian Day 315, selecting COMIDA2 results # 9 of 9
 For Julian Day 315, selecting COMIDA2 results # 9 of 9
 For Julian Day 315, selecting COMIDA2 results # 9 of 9
 For Julian Day 315, selecting COMIDA2 results # 9 of 9
 For Julian Day 317, selecting COMIDA2 results # 9 of 9
 For Julian Day 318, selecting COMIDA2 results # 9 of 9
 For Julian Day 321, selecting COMIDA2 results # 9 of 9
 For Julian Day 323, selecting COMIDA2 results # 9 of 9
 For Julian Day 324, selecting COMIDA2 results # 9 of 9
 For Julian Day 324, selecting COMIDA2 results # 9 of 9
 For Julian Day 324, selecting COMIDA2 results # 9 of 9
 For Julian Day 325, selecting COMIDA2 results # 9 of 9
 For Julian Day 325, selecting COMIDA2 results # 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-175 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-176 of 1.4-801

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

For Julian Day 353, selecting COMIDA2 results # 1 of 9
 For Julian Day 356, selecting COMIDA2 results # 1 of 9
 For Julian Day 358, selecting COMIDA2 results # 1 of 9
 For Julian Day 358, selecting COMIDA2 results # 1 of 9
 For Julian Day 363, selecting COMIDA2 results # 1 of 9
 For Julian Day 365, selecting COMIDA2 results # 1 of 9
 For Julian Day 365, selecting COMIDA2 results # 1 of 9
 For Julian Day 2, selecting COMIDA2 results # 1 of 9
 For Julian Day 3, selecting COMIDA2 results # 1 of 9
 For Julian Day 5, selecting COMIDA2 results # 1 of 9
 For Julian Day 6, selecting COMIDA2 results # 1 of 9
 For Julian Day 6, selecting COMIDA2 results # 1 of 9
 For Julian Day 10, selecting COMIDA2 results # 1 of 9
 For Julian Day 13, selecting COMIDA2 results # 1 of 9
 For Julian Day 16, selecting COMIDA2 results # 1 of 9
 For Julian Day 16, selecting COMIDA2 results # 1 of 9
 For Julian Day 18, selecting COMIDA2 results # 1 of 9
 For Julian Day 19, selecting COMIDA2 results # 1 of 9
 For Julian Day 20, selecting COMIDA2 results # 1 of 9
 For Julian Day 23, selecting COMIDA2 results # 1 of 9
 For Julian Day 24, selecting COMIDA2 results # 1 of 9
 For Julian Day 24, selecting COMIDA2 results # 1 of 9
 For Julian Day 25, selecting COMIDA2 results # 1 of 9
 For Julian Day 25, selecting COMIDA2 results # 1 of 9
 For Julian Day 25, selecting COMIDA2 results # 1 of 9
 For Julian Day 26, selecting COMIDA2 results # 1 of 9
 For Julian Day 33, selecting COMIDA2 results # 2 of 9
 For Julian Day 33, selecting COMIDA2 results # 2 of 9
 For Julian Day 36, selecting COMIDA2 results # 2 of 9
 For Julian Day 37, selecting COMIDA2 results # 2 of 9
 For Julian Day 39, selecting COMIDA2 results # 2 of 9
 For Julian Day 40, selecting COMIDA2 results # 2 of 9
 For Julian Day 42, selecting COMIDA2 results # 2 of 9
 For Julian Day 42, selecting COMIDA2 results # 2 of 9
 For Julian Day 43, selecting COMIDA2 results # 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-177 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 44,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 44,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 46,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 47,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 47,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 48,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 48,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 53,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 53,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 55,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 62,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 62,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 63,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 64,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 64,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 68,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 69,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 72,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 74,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 75,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 76,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 78,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 81,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 84,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 85,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 86,	selecting COMIDA2 results	# 2 of 9	
For Julian Day 87,	selecting COMIDA2 results	# 2 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-179 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 116,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 123,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 127,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 131,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 141,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 143,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 144,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 147,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 148,	selecting COMIDA2 results	# 4 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-180 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 149,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 154,	selecting COMIDA2	results	# 4 of 9
For Julian Day 155,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 158,	selecting COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-181 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 168,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-182 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9



ANALYSIS FOR PSEG ESPA	
Safety Related	Non-Safety Related
	X

Client	PSEG Nuclear Development		Prepared by		Date	
Project	PSEG ESPA		Reviewed by		Date	
Proj. No	12380-001	Equip. No.	Approved by		Date	

For Julian Day 251,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 253,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 253,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 254,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 254,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 255,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 255,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 260,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 260,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 263,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 264,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 266,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 269,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 269,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 270,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 271,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 271,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 271,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 271,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 272,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 274,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 274,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 275,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 276,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 276,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 277,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 278,	selecting	COMIDA2	results	#	8	of	9
For Julian Day 280,	selecting	COMIDA2	results	#	8	of	9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-185 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date
	Date
	Date

For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 289,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 297,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-186 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-187 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-188 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 39,	selecting COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-189 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 109,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-190 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 116,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 123,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 127,	selecting	COMIDA2	results # 3 of 9
For Julian Day 128,	selecting	COMIDA2	results # 3 of 9
For Julian Day 128,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 131,	selecting	COMIDA2	results # 3 of 9
For Julian Day 132,	selecting	COMIDA2	results # 3 of 9
For Julian Day 132,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 141,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 143,	selecting	COMIDA2	results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-193 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-195 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting	COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-197 of 1.4-801

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 315, selecting COMIDA2 results # 9 of 9
 For Julian Day 317, selecting COMIDA2 results # 9 of 9
 For Julian Day 318, selecting COMIDA2 results # 9 of 9
 For Julian Day 321, selecting COMIDA2 results # 9 of 9
 For Julian Day 323, selecting COMIDA2 results # 9 of 9
 For Julian Day 324, selecting COMIDA2 results # 9 of 9
 For Julian Day 324, selecting COMIDA2 results # 9 of 9
 For Julian Day 324, selecting COMIDA2 results # 9 of 9
 For Julian Day 324, selecting COMIDA2 results # 9 of 9
 For Julian Day 325, selecting COMIDA2 results # 9 of 9
 For Julian Day 325, selecting COMIDA2 results # 9 of 9
 For Julian Day 326, selecting COMIDA2 results # 9 of 9
 For Julian Day 326, selecting COMIDA2 results # 9 of 9
 For Julian Day 326, selecting COMIDA2 results # 9 of 9
 For Julian Day 327, selecting COMIDA2 results # 9 of 9
 For Julian Day 327, selecting COMIDA2 results # 9 of 9
 For Julian Day 328, selecting COMIDA2 results # 9 of 9
 For Julian Day 328, selecting COMIDA2 results # 9 of 9
 For Julian Day 330, selecting COMIDA2 results # 9 of 9
 For Julian Day 331, selecting COMIDA2 results # 9 of 9
 For Julian Day 333, selecting COMIDA2 results # 9 of 9
 For Julian Day 333, selecting COMIDA2 results # 9 of 9
 For Julian Day 333, selecting COMIDA2 results # 9 of 9
 For Julian Day 335, selecting COMIDA2 results # 1 of 9
 For Julian Day 335, selecting COMIDA2 results # 1 of 9
 For Julian Day 336, selecting COMIDA2 results # 1 of 9
 For Julian Day 336, selecting COMIDA2 results # 1 of 9
 For Julian Day 338, selecting COMIDA2 results # 1 of 9
 For Julian Day 338, selecting COMIDA2 results # 1 of 9
 For Julian Day 342, selecting COMIDA2 results # 1 of 9
 For Julian Day 342, selecting COMIDA2 results # 1 of 9
 For Julian Day 343, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-198 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-200 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-202 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 137,	selecting COMIDA2 results	# 4 of 9
For Julian Day 141,	selecting COMIDA2 results	# 4 of 9
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9
For Julian Day 143,	selecting COMIDA2 results	# 4 of 9
For Julian Day 144,	selecting COMIDA2 results	# 4 of 9
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9
For Julian Day 147,	selecting COMIDA2 results	# 4 of 9
For Julian Day 148,	selecting COMIDA2 results	# 4 of 9
For Julian Day 149,	selecting COMIDA2 results	# 4 of 9
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9
For Julian Day 154,	selecting COMIDA2 results	# 4 of 9
For Julian Day 155,	selecting COMIDA2 results	# 4 of 9
For Julian Day 156,	selecting COMIDA2 results	# 4 of 9
For Julian Day 156,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9
For Julian Day 158,	selecting COMIDA2 results	# 4 of 9
For Julian Day 159,	selecting COMIDA2 results	# 4 of 9
For Julian Day 159,	selecting COMIDA2 results	# 4 of 9
For Julian Day 160,	selecting COMIDA2 results	# 4 of 9
For Julian Day 160,	selecting COMIDA2 results	# 4 of 9
For Julian Day 162,	selecting COMIDA2 results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-203 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 168,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-204 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	Non-Safety Related
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-205 of 1.4-801	

Client PSEG Nuclear Development	
Project PSEG ESPA	
Proj. No 12380-001	Equip. No.
	Prepared by
	Reviewed by
	Approved by
	Date
	Date
	Date

For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 229,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-207 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 272,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 272,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 274,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 274,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 275,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 276,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 276,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 277,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 278,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 280,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 281,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 281,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 289,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 297,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 301,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 302,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 304,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 313,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-208 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9
For Julian Day 330,	selecting COMIDA2 results	# 9 of 9
For Julian Day 331,	selecting COMIDA2 results	# 9 of 9
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev. 2 Date

Page 1.4-209 of 1.4-801

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

Equip. No.	Safety Related	Non-Safety Related
For Julian Day 343,	selecting	COMIDA2 results # 1 of 9
For Julian Day 344,	selecting	COMIDA2 results # 1 of 9
For Julian Day 344,	selecting	COMIDA2 results # 1 of 9
For Julian Day 344,	selecting	COMIDA2 results # 1 of 9
For Julian Day 344,	selecting	COMIDA2 results # 1 of 9
For Julian Day 344,	selecting	COMIDA2 results # 1 of 9
For Julian Day 344,	selecting	COMIDA2 results # 1 of 9
For Julian Day 344,	selecting	COMIDA2 results # 1 of 9
For Julian Day 345,	selecting	COMIDA2 results # 1 of 9
For Julian Day 345,	selecting	COMIDA2 results # 1 of 9
For Julian Day 346,	selecting	COMIDA2 results # 1 of 9
For Julian Day 349,	selecting	COMIDA2 results # 1 of 9
For Julian Day 349,	selecting	COMIDA2 results # 1 of 9
For Julian Day 350,	selecting	COMIDA2 results # 1 of 9
For Julian Day 352,	selecting	COMIDA2 results # 1 of 9
For Julian Day 353,	selecting	COMIDA2 results # 1 of 9
For Julian Day 353,	selecting	COMIDA2 results # 1 of 9
For Julian Day 356,	selecting	COMIDA2 results # 1 of 9
For Julian Day 358,	selecting	COMIDA2 results # 1 of 9
For Julian Day 358,	selecting	COMIDA2 results # 1 of 9
For Julian Day 363,	selecting	COMIDA2 results # 1 of 9
For Julian Day 365,	selecting	COMIDA2 results # 1 of 9
For Julian Day 365,	selecting	COMIDA2 results # 1 of 9
For Julian Day 2,	selecting	COMIDA2 results # 1 of 9
For Julian Day 3,	selecting	COMIDA2 results # 1 of 9
For Julian Day 5,	selecting	COMIDA2 results # 1 of 9
For Julian Day 6,	selecting	COMIDA2 results # 1 of 9
For Julian Day 6,	selecting	COMIDA2 results # 1 of 9
For Julian Day 10,	selecting	COMIDA2 results # 1 of 9
For Julian Day 13,	selecting	COMIDA2 results # 1 of 9
For Julian Day 16,	selecting	COMIDA2 results # 1 of 9
For Julian Day 16,	selecting	COMIDA2 results # 1 of 9
For Julian Day 18,	selecting	COMIDA2 results # 1 of 9
For Julian Day 19,	selecting	COMIDA2 results # 1 of 9
For Julian Day 20,	selecting	COMIDA2 results # 1 of 9
For Julian Day 23,	selecting	COMIDA2 results # 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-210 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-211 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-212 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 105,	selecting	COMIDA2	results # 3 of 9
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9
For Julian Day 107,	selecting	COMIDA2	results # 3 of 9
For Julian Day 107,	selecting	COMIDA2	results # 3 of 9
For Julian Day 109,	selecting	COMIDA2	results # 3 of 9
For Julian Day 110,	selecting	COMIDA2	results # 3 of 9
For Julian Day 110,	selecting	COMIDA2	results # 3 of 9
For Julian Day 112,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 116,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 123,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 127,	selecting	COMIDA2	results # 3 of 9
For Julian Day 128,	selecting	COMIDA2	results # 3 of 9
For Julian Day 128,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 131,	selecting	COMIDA2	results # 3 of 9
For Julian Day 132,	selecting	COMIDA2	results # 3 of 9
For Julian Day 132,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-213 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 141,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 143,	selecting	COMIDA2	results # 4 of 9
For Julian Day 144,	selecting	COMIDA2	results # 4 of 9
For Julian Day 146,	selecting	COMIDA2	results # 4 of 9
For Julian Day 146,	selecting	COMIDA2	results # 4 of 9
For Julian Day 147,	selecting	COMIDA2	results # 4 of 9
For Julian Day 148,	selecting	COMIDA2	results # 4 of 9
For Julian Day 149,	selecting	COMIDA2	results # 4 of 9
For Julian Day 152,	selecting	COMIDA2	results # 4 of 9
For Julian Day 152,	selecting	COMIDA2	results # 4 of 9
For Julian Day 152,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 154,	selecting	COMIDA2	results # 4 of 9
For Julian Day 155,	selecting	COMIDA2	results # 4 of 9
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 158,	selecting	COMIDA2	results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-215 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-216 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 210,	selecting	COMIDA2	results # 6 of 9
For Julian Day 210,	selecting	COMIDA2	results # 6 of 9
For Julian Day 210,	selecting	COMIDA2	results # 6 of 9
For Julian Day 211,	selecting	COMIDA2	results # 6 of 9
For Julian Day 215,	selecting	COMIDA2	results # 6 of 9
For Julian Day 215,	selecting	COMIDA2	results # 6 of 9
For Julian Day 216,	selecting	COMIDA2	results # 6 of 9
For Julian Day 216,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 218,	selecting	COMIDA2	results # 6 of 9
For Julian Day 218,	selecting	COMIDA2	results # 6 of 9
For Julian Day 218,	selecting	COMIDA2	results # 6 of 9
For Julian Day 223,	selecting	COMIDA2	results # 7 of 9
For Julian Day 224,	selecting	COMIDA2	results # 7 of 9
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9
For Julian Day 227,	selecting	COMIDA2	results # 7 of 9
For Julian Day 228,	selecting	COMIDA2	results # 7 of 9
For Julian Day 228,	selecting	COMIDA2	results # 7 of 9
For Julian Day 228,	selecting	COMIDA2	results # 7 of 9
For Julian Day 229,	selecting	COMIDA2	results # 7 of 9
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
For Julian Day 231,	selecting	COMIDA2	results # 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-217 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 231,	selecting COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-218 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 277,	selecting COMIDA2	results	# 8 of 9
For Julian Day 278,	selecting COMIDA2	results	# 8 of 9
For Julian Day 280,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 289,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 297,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-219 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 313,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 330,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 331,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-220 of 1.4-801

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 336, selecting COMIDA2 results # 1 of 9
 For Julian Day 338, selecting COMIDA2 results # 1 of 9
 For Julian Day 338, selecting COMIDA2 results # 1 of 9
 For Julian Day 342, selecting COMIDA2 results # 1 of 9
 For Julian Day 342, selecting COMIDA2 results # 1 of 9
 For Julian Day 343, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 344, selecting COMIDA2 results # 1 of 9
 For Julian Day 345, selecting COMIDA2 results # 1 of 9
 For Julian Day 345, selecting COMIDA2 results # 1 of 9
 For Julian Day 346, selecting COMIDA2 results # 1 of 9
 For Julian Day 349, selecting COMIDA2 results # 1 of 9
 For Julian Day 349, selecting COMIDA2 results # 1 of 9
 For Julian Day 350, selecting COMIDA2 results # 1 of 9
 For Julian Day 352, selecting COMIDA2 results # 1 of 9
 For Julian Day 353, selecting COMIDA2 results # 1 of 9
 For Julian Day 353, selecting COMIDA2 results # 1 of 9
 For Julian Day 356, selecting COMIDA2 results # 1 of 9
 For Julian Day 358, selecting COMIDA2 results # 1 of 9
 For Julian Day 358, selecting COMIDA2 results # 1 of 9
 For Julian Day 363, selecting COMIDA2 results # 1 of 9
 For Julian Day 365, selecting COMIDA2 results # 1 of 9
 For Julian Day 365, selecting COMIDA2 results # 1 of 9
 For Julian Day 2, selecting COMIDA2 results # 1 of 9
 For Julian Day 3, selecting COMIDA2 results # 1 of 9
 For Julian Day 5, selecting COMIDA2 results # 1 of 9
 For Julian Day 6, selecting COMIDA2 results # 1 of 9
 For Julian Day 6, selecting COMIDA2 results # 1 of 9
 For Julian Day 10, selecting COMIDA2 results # 1 of 9
 For Julian Day 13, selecting COMIDA2 results # 1 of 9
 For Julian Day 16, selecting COMIDA2 results # 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-221 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-222 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 68,	selecting COMIDA2 results	# 2 of 9
For Julian Day 69,	selecting COMIDA2 results	# 2 of 9
For Julian Day 72,	selecting COMIDA2 results	# 2 of 9
For Julian Day 74,	selecting COMIDA2 results	# 2 of 9
For Julian Day 75,	selecting COMIDA2 results	# 2 of 9
For Julian Day 76,	selecting COMIDA2 results	# 2 of 9
For Julian Day 78,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 81,	selecting COMIDA2 results	# 2 of 9
For Julian Day 84,	selecting COMIDA2 results	# 2 of 9
For Julian Day 85,	selecting COMIDA2 results	# 2 of 9
For Julian Day 86,	selecting COMIDA2 results	# 2 of 9
For Julian Day 87,	selecting COMIDA2 results	# 2 of 9
For Julian Day 89,	selecting COMIDA2 results	# 2 of 9
For Julian Day 90,	selecting COMIDA2 results	# 2 of 9
For Julian Day 91,	selecting COMIDA2 results	# 2 of 9
For Julian Day 94,	selecting COMIDA2 results	# 3 of 9
For Julian Day 95,	selecting COMIDA2 results	# 3 of 9
For Julian Day 96,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-223 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 109,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-224 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 154,	selecting COMIDA2	results	# 4 of 9
For Julian Day 155,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9

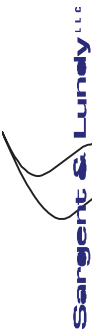


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-226 of 1.4-801

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting	COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No.	2009-11222
Rev.	2
Page	1.4-228 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
For Julian Day 231,	selecting	COMIDA2	results # 7 of 9
For Julian Day 231,	selecting	COMIDA2	results # 7 of 9
For Julian Day 231,	selecting	COMIDA2	results # 7 of 9
For Julian Day 231,	selecting	COMIDA2	results # 7 of 9
For Julian Day 231,	selecting	COMIDA2	results # 7 of 9
For Julian Day 231,	selecting	COMIDA2	results # 7 of 9
For Julian Day 234,	selecting	COMIDA2	results # 7 of 9
For Julian Day 235,	selecting	COMIDA2	results # 7 of 9
For Julian Day 236,	selecting	COMIDA2	results # 7 of 9
For Julian Day 238,	selecting	COMIDA2	results # 7 of 9
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9
For Julian Day 245,	selecting	COMIDA2	results # 7 of 9
For Julian Day 248,	selecting	COMIDA2	results # 7 of 9
For Julian Day 250,	selecting	COMIDA2	results # 7 of 9
For Julian Day 251,	selecting	COMIDA2	results # 7 of 9
For Julian Day 253,	selecting	COMIDA2	results # 7 of 9
For Julian Day 253,	selecting	COMIDA2	results # 7 of 9
For Julian Day 254,	selecting	COMIDA2	results # 7 of 9
For Julian Day 254,	selecting	COMIDA2	results # 7 of 9
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9
For Julian Day 263,	selecting	COMIDA2	results # 8 of 9
For Julian Day 264,	selecting	COMIDA2	results # 8 of 9
For Julian Day 266,	selecting	COMIDA2	results # 8 of 9
For Julian Day 269,	selecting	COMIDA2	results # 8 of 9
For Julian Day 269,	selecting	COMIDA2	results # 8 of 9
For Julian Day 270,	selecting	COMIDA2	results # 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-230 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 301,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 302,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 304,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 313,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 330,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 331,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-231 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-232 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-233 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-234 of 1.4-801

Client PSEG Nuclear Development	Safety Related	X	Non-Safety Related
Project PSEG ESPA			
Proj. No 12380-001	Equip. No.	Prepared by	Date
		Reviewed by	Date
		Approved by	Date

For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 109,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-237 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-238 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-241 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 297,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-242 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-243 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-244 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 48,	selecting COMIDA2 results	# 2 of 9
For Julian Day 48,	selecting COMIDA2 results	# 2 of 9
For Julian Day 53,	selecting COMIDA2 results	# 2 of 9
For Julian Day 53,	selecting COMIDA2 results	# 2 of 9
For Julian Day 55,	selecting COMIDA2 results	# 2 of 9
For Julian Day 62,	selecting COMIDA2 results	# 2 of 9
For Julian Day 62,	selecting COMIDA2 results	# 2 of 9
For Julian Day 63,	selecting COMIDA2 results	# 2 of 9
For Julian Day 64,	selecting COMIDA2 results	# 2 of 9
For Julian Day 64,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 68,	selecting COMIDA2 results	# 2 of 9
For Julian Day 69,	selecting COMIDA2 results	# 2 of 9
For Julian Day 72,	selecting COMIDA2 results	# 2 of 9
For Julian Day 74,	selecting COMIDA2 results	# 2 of 9
For Julian Day 75,	selecting COMIDA2 results	# 2 of 9
For Julian Day 76,	selecting COMIDA2 results	# 2 of 9
For Julian Day 78,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 81,	selecting COMIDA2 results	# 2 of 9
For Julian Day 84,	selecting COMIDA2 results	# 2 of 9
For Julian Day 85,	selecting COMIDA2 results	# 2 of 9
For Julian Day 86,	selecting COMIDA2 results	# 2 of 9
For Julian Day 87,	selecting COMIDA2 results	# 2 of 9
For Julian Day 89,	selecting COMIDA2 results	# 2 of 9
For Julian Day 90,	selecting COMIDA2 results	# 2 of 9
For Julian Day 91,	selecting COMIDA2 results	# 2 of 9
For Julian Day 94,	selecting COMIDA2 results	# 3 of 9
For Julian Day 95,	selecting COMIDA2 results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-245 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 96,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 109,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 112,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 116,	selecting COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9
For Julian Day 123,	selecting COMIDA2 results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-246 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date
	Date
	Date

For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-249 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 198,	selecting COMIDA2 results	# 6 of 9
For Julian Day 200,	selecting COMIDA2 results	# 6 of 9
For Julian Day 202,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 206,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 211,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 218,	selecting COMIDA2 results	# 6 of 9
For Julian Day 218,	selecting COMIDA2 results	# 6 of 9
For Julian Day 223,	selecting COMIDA2 results	# 7 of 9
For Julian Day 224,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-250 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 229,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-251 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 255,	selecting	COMIDA2	results # 7 of 9
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9
For Julian Day 263,	selecting	COMIDA2	results # 8 of 9
For Julian Day 264,	selecting	COMIDA2	results # 8 of 9
For Julian Day 266,	selecting	COMIDA2	results # 8 of 9
For Julian Day 269,	selecting	COMIDA2	results # 8 of 9
For Julian Day 269,	selecting	COMIDA2	results # 8 of 9
For Julian Day 270,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 275,	selecting	COMIDA2	results # 8 of 9
For Julian Day 276,	selecting	COMIDA2	results # 8 of 9
For Julian Day 276,	selecting	COMIDA2	results # 8 of 9
For Julian Day 277,	selecting	COMIDA2	results # 8 of 9
For Julian Day 278,	selecting	COMIDA2	results # 8 of 9
For Julian Day 280,	selecting	COMIDA2	results # 8 of 9
For Julian Day 281,	selecting	COMIDA2	results # 8 of 9
For Julian Day 281,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-252 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 285,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 289,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 297,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 301,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 302,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 304,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 313,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-253 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-254 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-255 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 44,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 44,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 46,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 47,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 47,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 48,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 48,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 53,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 53,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 55,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 62,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 62,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 63,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 64,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 64,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 66,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 66,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 66,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 66,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 68,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 69,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 72,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 74,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 75,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 76,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 78,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 79,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 79,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 80,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 80,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 81,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 84,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 85,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 86,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	
For Julian Day 87,	selecting COMIDA2 results # 2 of 9	results # 2 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-257 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 116,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 123,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 127,	selecting	COMIDA2	results # 3 of 9
For Julian Day 128,	selecting	COMIDA2	results # 3 of 9
For Julian Day 128,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 131,	selecting	COMIDA2	results # 3 of 9
For Julian Day 132,	selecting	COMIDA2	results # 3 of 9
For Julian Day 132,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 141,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 143,	selecting	COMIDA2	results # 4 of 9
For Julian Day 144,	selecting	COMIDA2	results # 4 of 9
For Julian Day 146,	selecting	COMIDA2	results # 4 of 9
For Julian Day 146,	selecting	COMIDA2	results # 4 of 9
For Julian Day 147,	selecting	COMIDA2	results # 4 of 9
For Julian Day 148,	selecting	COMIDA2	results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-258 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

For Julian Day 149,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 154,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 155,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 158,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-260 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-263 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 281,	selecting COMIDA2 results	# 8 of 9
For Julian Day 281,	selecting COMIDA2 results	# 8 of 9
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9
For Julian Day 289,	selecting COMIDA2 results	# 9 of 9
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9
For Julian Day 297,	selecting COMIDA2 results	# 9 of 9
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9
For Julian Day 301,	selecting COMIDA2 results	# 9 of 9
For Julian Day 302,	selecting COMIDA2 results	# 9 of 9
For Julian Day 304,	selecting COMIDA2 results	# 9 of 9
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9
For Julian Day 313,	selecting COMIDA2 results	# 9 of 9
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-264 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-265 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-266 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 39,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2	of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-267 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 81,	selecting COMIDA2 results	# 2 of 9
For Julian Day 84,	selecting COMIDA2 results	# 2 of 9
For Julian Day 85,	selecting COMIDA2 results	# 2 of 9
For Julian Day 86,	selecting COMIDA2 results	# 2 of 9
For Julian Day 87,	selecting COMIDA2 results	# 2 of 9
For Julian Day 89,	selecting COMIDA2 results	# 2 of 9
For Julian Day 90,	selecting COMIDA2 results	# 2 of 9
For Julian Day 91,	selecting COMIDA2 results	# 2 of 9
For Julian Day 94,	selecting COMIDA2 results	# 3 of 9
For Julian Day 95,	selecting COMIDA2 results	# 3 of 9
For Julian Day 96,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 109,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 112,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-268 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 116,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 123,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 127,	selecting	COMIDA2	results # 3 of 9
For Julian Day 128,	selecting	COMIDA2	results # 3 of 9
For Julian Day 128,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 131,	selecting	COMIDA2	results # 3 of 9
For Julian Day 132,	selecting	COMIDA2	results # 3 of 9
For Julian Day 132,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 141,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 143,	selecting	COMIDA2	results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-271 of 1.4-801

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

For Julian Day 186, selecting COMIDA2 results # 5 of 9
 For Julian Day 186, selecting COMIDA2 results # 5 of 9
 For Julian Day 187, selecting COMIDA2 results # 5 of 9
 For Julian Day 187, selecting COMIDA2 results # 5 of 9
 For Julian Day 187, selecting COMIDA2 results # 5 of 9
 For Julian Day 189, selecting COMIDA2 results # 5 of 9
 For Julian Day 190, selecting COMIDA2 results # 5 of 9
 For Julian Day 190, selecting COMIDA2 results # 5 of 9
 For Julian Day 194, selecting COMIDA2 results # 6 of 9
 For Julian Day 194, selecting COMIDA2 results # 6 of 9
 For Julian Day 194, selecting COMIDA2 results # 6 of 9
 For Julian Day 194, selecting COMIDA2 results # 6 of 9
 For Julian Day 194, selecting COMIDA2 results # 6 of 9
 For Julian Day 196, selecting COMIDA2 results # 6 of 9
 For Julian Day 196, selecting COMIDA2 results # 6 of 9
 For Julian Day 198, selecting COMIDA2 results # 6 of 9
 For Julian Day 200, selecting COMIDA2 results # 6 of 9
 For Julian Day 202, selecting COMIDA2 results # 6 of 9
 For Julian Day 204, selecting COMIDA2 results # 6 of 9
 For Julian Day 204, selecting COMIDA2 results # 6 of 9
 For Julian Day 206, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 210, selecting COMIDA2 results # 6 of 9
 For Julian Day 210, selecting COMIDA2 results # 6 of 9
 For Julian Day 210, selecting COMIDA2 results # 6 of 9
 For Julian Day 210, selecting COMIDA2 results # 6 of 9
 For Julian Day 211, selecting COMIDA2 results # 6 of 9
 For Julian Day 215, selecting COMIDA2 results # 6 of 9
 For Julian Day 215, selecting COMIDA2 results # 6 of 9
 For Julian Day 216, selecting COMIDA2 results # 6 of 9
 For Julian Day 216, selecting COMIDA2 results # 6 of 9
 For Julian Day 217, selecting COMIDA2 results # 6 of 9
 For Julian Day 217, selecting COMIDA2 results # 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-273 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting	COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page 1.4-275 of 1.4-801

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

Equip. No.	Safety Related	Non-Safety Related	Prepared by	Reviewed by	Approved by
For Julian Day 315,	selecting COMIDA2 results # 9 of 9				
For Julian Day 317,	selecting COMIDA2 results # 9 of 9				
For Julian Day 318,	selecting COMIDA2 results # 9 of 9				
For Julian Day 321,	selecting COMIDA2 results # 9 of 9				
For Julian Day 323,	selecting COMIDA2 results # 9 of 9				
For Julian Day 324,	selecting COMIDA2 results # 9 of 9				
For Julian Day 324,	selecting COMIDA2 results # 9 of 9				
For Julian Day 324,	selecting COMIDA2 results # 9 of 9				
For Julian Day 325,	selecting COMIDA2 results # 9 of 9				
For Julian Day 325,	selecting COMIDA2 results # 9 of 9				
For Julian Day 326,	selecting COMIDA2 results # 9 of 9				
For Julian Day 326,	selecting COMIDA2 results # 9 of 9				
For Julian Day 326,	selecting COMIDA2 results # 9 of 9				
For Julian Day 327,	selecting COMIDA2 results # 9 of 9				
For Julian Day 327,	selecting COMIDA2 results # 9 of 9				
For Julian Day 328,	selecting COMIDA2 results # 9 of 9				
For Julian Day 328,	selecting COMIDA2 results # 9 of 9				
For Julian Day 330,	selecting COMIDA2 results # 9 of 9				
For Julian Day 331,	selecting COMIDA2 results # 9 of 9				
For Julian Day 333,	selecting COMIDA2 results # 9 of 9				
For Julian Day 333,	selecting COMIDA2 results # 9 of 9				
For Julian Day 333,	selecting COMIDA2 results # 9 of 9				
For Julian Day 335,	selecting COMIDA2 results # 1 of 9				
For Julian Day 335,	selecting COMIDA2 results # 1 of 9				
For Julian Day 336,	selecting COMIDA2 results # 1 of 9				
For Julian Day 336,	selecting COMIDA2 results # 1 of 9				
For Julian Day 338,	selecting COMIDA2 results # 1 of 9				
For Julian Day 338,	selecting COMIDA2 results # 1 of 9				
For Julian Day 342,	selecting COMIDA2 results # 1 of 9				
For Julian Day 342,	selecting COMIDA2 results # 1 of 9				
For Julian Day 343,	selecting COMIDA2 results # 1 of 9				
For Julian Day 344,	selecting COMIDA2 results # 1 of 9				
For Julian Day 344,	selecting COMIDA2 results # 1 of 9				
For Julian Day 344,	selecting COMIDA2 results # 1 of 9				
For Julian Day 344,	selecting COMIDA2 results # 1 of 9				



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-276 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 344,	selecting	COMIDA2	results # 1 of 9
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9
For Julian Day 345,	selecting	COMIDA2	results # 1 of 9
For Julian Day 345,	selecting	COMIDA2	results # 1 of 9
For Julian Day 346,	selecting	COMIDA2	results # 1 of 9
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9
For Julian Day 350,	selecting	COMIDA2	results # 1 of 9
For Julian Day 352,	selecting	COMIDA2	results # 1 of 9
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9
For Julian Day 356,	selecting	COMIDA2	results # 1 of 9
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9
For Julian Day 363,	selecting	COMIDA2	results # 1 of 9
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9
For Julian Day 2,	selecting	COMIDA2	results # 1 of 9
For Julian Day 3,	selecting	COMIDA2	results # 1 of 9
For Julian Day 5,	selecting	COMIDA2	results # 1 of 9
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9
For Julian Day 10,	selecting	COMIDA2	results # 1 of 9
For Julian Day 13,	selecting	COMIDA2	results # 1 of 9
For Julian Day 16,	selecting	COMIDA2	results # 1 of 9
For Julian Day 16,	selecting	COMIDA2	results # 1 of 9
For Julian Day 18,	selecting	COMIDA2	results # 1 of 9
For Julian Day 19,	selecting	COMIDA2	results # 1 of 9
For Julian Day 20,	selecting	COMIDA2	results # 1 of 9
For Julian Day 23,	selecting	COMIDA2	results # 1 of 9
For Julian Day 24,	selecting	COMIDA2	results # 1 of 9
For Julian Day 24,	selecting	COMIDA2	results # 1 of 9
For Julian Day 25,	selecting	COMIDA2	results # 1 of 9
For Julian Day 25,	selecting	COMIDA2	results # 1 of 9
For Julian Day 25,	selecting	COMIDA2	results # 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-277 of 1.4-801

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-278 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-279 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 109,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 112,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 116,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 123,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 127,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 131,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-280 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 154,	selecting COMIDA2	results	# 4 of 9
For Julian Day 155,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 158,	selecting COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-281 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting COMIDA2	results	# 4 of 9
For Julian Day 167,	selecting COMIDA2	results	# 5 of 9
For Julian Day 167,	selecting COMIDA2	results	# 5 of 9
For Julian Day 168,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-282 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting	COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No.	2009-11222
Rev.	2
Date	
Page	1.4-283 of 1.4-801

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

For Julian Day 215,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 216,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 216,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 217,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 217,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 217,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 217,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 217,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 217,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 217,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 217,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 218,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 218,	selecting	COMIDA2	results	#	6	of	9
For Julian Day 223,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 224,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 226,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 226,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 226,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 226,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 227,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 228,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 228,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 228,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 229,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 230,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 231,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 231,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 231,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 231,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 234,	selecting	COMIDA2	results	#	7	of	9
For Julian Day 235,	selecting	COMIDA2	results	#	7	of	9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-285 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 272,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 272,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 274,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 274,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 275,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 276,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 276,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 277,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 278,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 280,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 281,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 281,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 289,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 297,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 301,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 302,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 304,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 313,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-286 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001 Equip. No.	Approved by
	Date
	Date
	Date

For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-287 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 343,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1	of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-288 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-289 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 69,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 72,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 74,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 75,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 76,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 78,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 79,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 79,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 80,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 80,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 81,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 84,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 85,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 86,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 87,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 89,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 90,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 91,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 94,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 95,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 96,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 97,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 97,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 98,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 98,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 98,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 99,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 99,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 100,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 100,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 102,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 102,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 104,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 104,	selecting COMIDA2 results # 3 of 9	results # 3 of 9
For Julian Day 104,	selecting COMIDA2 results # 3 of 9	results # 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-290 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 109,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-291 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 141,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 143,	selecting	COMIDA2	results # 4 of 9
For Julian Day 144,	selecting	COMIDA2	results # 4 of 9
For Julian Day 146,	selecting	COMIDA2	results # 4 of 9
For Julian Day 146,	selecting	COMIDA2	results # 4 of 9
For Julian Day 147,	selecting	COMIDA2	results # 4 of 9
For Julian Day 148,	selecting	COMIDA2	results # 4 of 9
For Julian Day 149,	selecting	COMIDA2	results # 4 of 9
For Julian Day 152,	selecting	COMIDA2	results # 4 of 9
For Julian Day 152,	selecting	COMIDA2	results # 4 of 9
For Julian Day 152,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 154,	selecting	COMIDA2	results # 4 of 9
For Julian Day 155,	selecting	COMIDA2	results # 4 of 9
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 158,	selecting	COMIDA2	results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-293 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-295 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 231,	selecting	COMIDA2	results # 7 of 9
For Julian Day 231,	selecting	COMIDA2	results # 7 of 9
For Julian Day 231,	selecting	COMIDA2	results # 7 of 9
For Julian Day 234,	selecting	COMIDA2	results # 7 of 9
For Julian Day 235,	selecting	COMIDA2	results # 7 of 9
For Julian Day 236,	selecting	COMIDA2	results # 7 of 9
For Julian Day 238,	selecting	COMIDA2	results # 7 of 9
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9
For Julian Day 245,	selecting	COMIDA2	results # 7 of 9
For Julian Day 248,	selecting	COMIDA2	results # 7 of 9
For Julian Day 250,	selecting	COMIDA2	results # 7 of 9
For Julian Day 251,	selecting	COMIDA2	results # 7 of 9
For Julian Day 253,	selecting	COMIDA2	results # 7 of 9
For Julian Day 253,	selecting	COMIDA2	results # 7 of 9
For Julian Day 254,	selecting	COMIDA2	results # 7 of 9
For Julian Day 254,	selecting	COMIDA2	results # 7 of 9
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9
For Julian Day 263,	selecting	COMIDA2	results # 8 of 9
For Julian Day 264,	selecting	COMIDA2	results # 8 of 9
For Julian Day 266,	selecting	COMIDA2	results # 8 of 9
For Julian Day 269,	selecting	COMIDA2	results # 8 of 9
For Julian Day 269,	selecting	COMIDA2	results # 8 of 9
For Julian Day 270,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-296 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 277,	selecting COMIDA2	results	# 8 of 9
For Julian Day 278,	selecting COMIDA2	results	# 8 of 9
For Julian Day 280,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 289,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 297,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-297 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-298 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-299 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-300 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related	
----------------	---	--------------------	--

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-301 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 109,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 112,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 116,	selecting COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9
For Julian Day 123,	selecting COMIDA2 results	# 3 of 9
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9
For Julian Day 127,	selecting COMIDA2 results	# 3 of 9
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-302 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 130,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 137,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 154,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 155,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-304 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date
	Date
	Date

For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-306 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting	COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-308 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 301,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 302,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 304,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 313,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 330,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 331,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-309 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-310 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-311 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 62,	selecting COMIDA2 results	# 2 of 9
For Julian Day 62,	selecting COMIDA2 results	# 2 of 9
For Julian Day 63,	selecting COMIDA2 results	# 2 of 9
For Julian Day 64,	selecting COMIDA2 results	# 2 of 9
For Julian Day 64,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 68,	selecting COMIDA2 results	# 2 of 9
For Julian Day 69,	selecting COMIDA2 results	# 2 of 9
For Julian Day 72,	selecting COMIDA2 results	# 2 of 9
For Julian Day 74,	selecting COMIDA2 results	# 2 of 9
For Julian Day 75,	selecting COMIDA2 results	# 2 of 9
For Julian Day 76,	selecting COMIDA2 results	# 2 of 9
For Julian Day 78,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 81,	selecting COMIDA2 results	# 2 of 9
For Julian Day 84,	selecting COMIDA2 results	# 2 of 9
For Julian Day 85,	selecting COMIDA2 results	# 2 of 9
For Julian Day 86,	selecting COMIDA2 results	# 2 of 9
For Julian Day 87,	selecting COMIDA2 results	# 2 of 9
For Julian Day 89,	selecting COMIDA2 results	# 2 of 9
For Julian Day 90,	selecting COMIDA2 results	# 2 of 9
For Julian Day 91,	selecting COMIDA2 results	# 2 of 9
For Julian Day 94,	selecting COMIDA2 results	# 3 of 9
For Julian Day 95,	selecting COMIDA2 results	# 3 of 9
For Julian Day 96,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-312 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 98,	selecting	COMIDA2	results # 3 of 9
For Julian Day 99,	selecting	COMIDA2	results # 3 of 9
For Julian Day 99,	selecting	COMIDA2	results # 3 of 9
For Julian Day 100,	selecting	COMIDA2	results # 3 of 9
For Julian Day 100,	selecting	COMIDA2	results # 3 of 9
For Julian Day 102,	selecting	COMIDA2	results # 3 of 9
For Julian Day 102,	selecting	COMIDA2	results # 3 of 9
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9
For Julian Day 104,	selecting	COMIDA2	results # 3 of 9
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9
For Julian Day 105,	selecting	COMIDA2	results # 3 of 9
For Julian Day 107,	selecting	COMIDA2	results # 3 of 9
For Julian Day 107,	selecting	COMIDA2	results # 3 of 9
For Julian Day 109,	selecting	COMIDA2	results # 3 of 9
For Julian Day 110,	selecting	COMIDA2	results # 3 of 9
For Julian Day 110,	selecting	COMIDA2	results # 3 of 9
For Julian Day 112,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 116,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 123,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 127,	selecting	COMIDA2	results # 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-314 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

For Julian Day 155,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 158,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 168,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-315 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-316 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-319 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 297,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-320 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-321 of 1.4-801

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 365, selecting COMIDA2 results # 1 of 9
 For Julian Day 365, selecting COMIDA2 results # 1 of 9
 For Julian Day 2, selecting COMIDA2 results # 1 of 9
 For Julian Day 3, selecting COMIDA2 results # 1 of 9
 For Julian Day 5, selecting COMIDA2 results # 1 of 9
 For Julian Day 6, selecting COMIDA2 results # 1 of 9
 For Julian Day 6, selecting COMIDA2 results # 1 of 9
 For Julian Day 10, selecting COMIDA2 results # 1 of 9
 For Julian Day 13, selecting COMIDA2 results # 1 of 9
 For Julian Day 16, selecting COMIDA2 results # 1 of 9
 For Julian Day 16, selecting COMIDA2 results # 1 of 9
 For Julian Day 18, selecting COMIDA2 results # 1 of 9
 For Julian Day 19, selecting COMIDA2 results # 1 of 9
 For Julian Day 20, selecting COMIDA2 results # 1 of 9
 For Julian Day 23, selecting COMIDA2 results # 1 of 9
 For Julian Day 24, selecting COMIDA2 results # 1 of 9
 For Julian Day 24, selecting COMIDA2 results # 1 of 9
 For Julian Day 25, selecting COMIDA2 results # 1 of 9
 For Julian Day 25, selecting COMIDA2 results # 1 of 9
 For Julian Day 25, selecting COMIDA2 results # 1 of 9
 For Julian Day 26, selecting COMIDA2 results # 1 of 9
 For Julian Day 33, selecting COMIDA2 results # 2 of 9
 For Julian Day 33, selecting COMIDA2 results # 2 of 9
 For Julian Day 36, selecting COMIDA2 results # 2 of 9
 For Julian Day 37, selecting COMIDA2 results # 2 of 9
 For Julian Day 39, selecting COMIDA2 results # 2 of 9
 For Julian Day 40, selecting COMIDA2 results # 2 of 9
 For Julian Day 42, selecting COMIDA2 results # 2 of 9
 For Julian Day 42, selecting COMIDA2 results # 2 of 9
 For Julian Day 43, selecting COMIDA2 results # 2 of 9
 For Julian Day 44, selecting COMIDA2 results # 2 of 9
 For Julian Day 44, selecting COMIDA2 results # 2 of 9
 For Julian Day 46, selecting COMIDA2 results # 2 of 9
 For Julian Day 47, selecting COMIDA2 results # 2 of 9
 For Julian Day 47, selecting COMIDA2 results # 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-322 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date
Equip. No.		

For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-323 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
	Date
	Date
	Date

Proj. No	Equip. No.	Description	Results
For Julian Day 96,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 109,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 112,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 116,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting	COMIDA2 results	# 3 of 9
For Julian Day 123,	selecting	COMIDA2 results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-324 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 124,	selecting COMIDA2 results	# 3 of 9
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9
For Julian Day 127,	selecting COMIDA2 results	# 3 of 9
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 131,	selecting COMIDA2 results	# 3 of 9
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9
For Julian Day 141,	selecting COMIDA2 results	# 4 of 9
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9
For Julian Day 143,	selecting COMIDA2 results	# 4 of 9
For Julian Day 144,	selecting COMIDA2 results	# 4 of 9
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9
For Julian Day 147,	selecting COMIDA2 results	# 4 of 9
For Julian Day 148,	selecting COMIDA2 results	# 4 of 9
For Julian Day 149,	selecting COMIDA2 results	# 4 of 9
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-327 of 1.4-801

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 194, selecting COMIDA2 results # 6 of 9
 For Julian Day 194, selecting COMIDA2 results # 6 of 9
 For Julian Day 196, selecting COMIDA2 results # 6 of 9
 For Julian Day 196, selecting COMIDA2 results # 6 of 9
 For Julian Day 198, selecting COMIDA2 results # 6 of 9
 For Julian Day 200, selecting COMIDA2 results # 6 of 9
 For Julian Day 202, selecting COMIDA2 results # 6 of 9
 For Julian Day 204, selecting COMIDA2 results # 6 of 9
 For Julian Day 204, selecting COMIDA2 results # 6 of 9
 For Julian Day 206, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 209, selecting COMIDA2 results # 6 of 9
 For Julian Day 210, selecting COMIDA2 results # 6 of 9
 For Julian Day 210, selecting COMIDA2 results # 6 of 9
 For Julian Day 210, selecting COMIDA2 results # 6 of 9
 For Julian Day 210, selecting COMIDA2 results # 6 of 9
 For Julian Day 211, selecting COMIDA2 results # 6 of 9
 For Julian Day 215, selecting COMIDA2 results # 6 of 9
 For Julian Day 215, selecting COMIDA2 results # 6 of 9
 For Julian Day 216, selecting COMIDA2 results # 6 of 9
 For Julian Day 216, selecting COMIDA2 results # 6 of 9
 For Julian Day 217, selecting COMIDA2 results # 6 of 9
 For Julian Day 217, selecting COMIDA2 results # 6 of 9
 For Julian Day 217, selecting COMIDA2 results # 6 of 9
 For Julian Day 217, selecting COMIDA2 results # 6 of 9
 For Julian Day 217, selecting COMIDA2 results # 6 of 9
 For Julian Day 217, selecting COMIDA2 results # 6 of 9
 For Julian Day 218, selecting COMIDA2 results # 6 of 9
 For Julian Day 218, selecting COMIDA2 results # 6 of 9
 For Julian Day 223, selecting COMIDA2 results # 7 of 9
 For Julian Day 224, selecting COMIDA2 results # 7 of 9
 For Julian Day 226, selecting COMIDA2 results # 7 of 9
 For Julian Day 226, selecting COMIDA2 results # 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-329 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 277,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 278,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 280,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting	COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-330 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 285,	selecting COMIDA2 results	# 8 of 9
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9
For Julian Day 289,	selecting COMIDA2 results	# 9 of 9
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9
For Julian Day 297,	selecting COMIDA2 results	# 9 of 9
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9
For Julian Day 301,	selecting COMIDA2 results	# 9 of 9
For Julian Day 302,	selecting COMIDA2 results	# 9 of 9
For Julian Day 304,	selecting COMIDA2 results	# 9 of 9
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9
For Julian Day 313,	selecting COMIDA2 results	# 9 of 9
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev. 2 Date

Page 1.4-331 of 1.4-801

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

Equip. No.	Safety Related	Non-Safety Related
For Julian Day 326,	selecting COMIDA2 results # 9 of 9	
For Julian Day 326,	selecting COMIDA2 results # 9 of 9	
For Julian Day 326,	selecting COMIDA2 results # 9 of 9	
For Julian Day 327,	selecting COMIDA2 results # 9 of 9	
For Julian Day 327,	selecting COMIDA2 results # 9 of 9	
For Julian Day 328,	selecting COMIDA2 results # 9 of 9	
For Julian Day 328,	selecting COMIDA2 results # 9 of 9	
For Julian Day 330,	selecting COMIDA2 results # 9 of 9	
For Julian Day 331,	selecting COMIDA2 results # 9 of 9	
For Julian Day 333,	selecting COMIDA2 results # 9 of 9	
For Julian Day 333,	selecting COMIDA2 results # 9 of 9	
For Julian Day 333,	selecting COMIDA2 results # 9 of 9	
For Julian Day 335,	selecting COMIDA2 results # 1 of 9	
For Julian Day 335,	selecting COMIDA2 results # 1 of 9	
For Julian Day 336,	selecting COMIDA2 results # 1 of 9	
For Julian Day 336,	selecting COMIDA2 results # 1 of 9	
For Julian Day 338,	selecting COMIDA2 results # 1 of 9	
For Julian Day 338,	selecting COMIDA2 results # 1 of 9	
For Julian Day 342,	selecting COMIDA2 results # 1 of 9	
For Julian Day 342,	selecting COMIDA2 results # 1 of 9	
For Julian Day 343,	selecting COMIDA2 results # 1 of 9	
For Julian Day 344,	selecting COMIDA2 results # 1 of 9	
For Julian Day 344,	selecting COMIDA2 results # 1 of 9	
For Julian Day 344,	selecting COMIDA2 results # 1 of 9	
For Julian Day 344,	selecting COMIDA2 results # 1 of 9	
For Julian Day 344,	selecting COMIDA2 results # 1 of 9	
For Julian Day 344,	selecting COMIDA2 results # 1 of 9	
For Julian Day 344,	selecting COMIDA2 results # 1 of 9	
For Julian Day 345,	selecting COMIDA2 results # 1 of 9	
For Julian Day 345,	selecting COMIDA2 results # 1 of 9	
For Julian Day 346,	selecting COMIDA2 results # 1 of 9	
For Julian Day 349,	selecting COMIDA2 results # 1 of 9	
For Julian Day 349,	selecting COMIDA2 results # 1 of 9	
For Julian Day 350,	selecting COMIDA2 results # 1 of 9	
For Julian Day 352,	selecting COMIDA2 results # 1 of 9	
For Julian Day 353,	selecting COMIDA2 results # 1 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-332 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222
Rev. 2
Page 1.4-333 of 1.4-801
Date

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-335 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 116,	selecting COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9
For Julian Day 123,	selecting COMIDA2 results	# 3 of 9
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9
For Julian Day 127,	selecting COMIDA2 results	# 3 of 9
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 131,	selecting COMIDA2 results	# 3 of 9
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9
For Julian Day 141,	selecting COMIDA2 results	# 4 of 9
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9
For Julian Day 143,	selecting COMIDA2 results	# 4 of 9
For Julian Day 144,	selecting COMIDA2 results	# 4 of 9
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9
For Julian Day 147,	selecting COMIDA2 results	# 4 of 9
For Julian Day 148,	selecting COMIDA2 results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-336 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 149,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 154,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 155,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 158,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-337 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 168,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-338 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 189,	selecting	COMIDA2	results # 5 of 9
For Julian Day 190,	selecting	COMIDA2	results # 5 of 9
For Julian Day 190,	selecting	COMIDA2	results # 5 of 9
For Julian Day 194,	selecting	COMIDA2	results # 6 of 9
For Julian Day 194,	selecting	COMIDA2	results # 6 of 9
For Julian Day 194,	selecting	COMIDA2	results # 6 of 9
For Julian Day 194,	selecting	COMIDA2	results # 6 of 9
For Julian Day 194,	selecting	COMIDA2	results # 6 of 9
For Julian Day 196,	selecting	COMIDA2	results # 6 of 9
For Julian Day 196,	selecting	COMIDA2	results # 6 of 9
For Julian Day 198,	selecting	COMIDA2	results # 6 of 9
For Julian Day 200,	selecting	COMIDA2	results # 6 of 9
For Julian Day 202,	selecting	COMIDA2	results # 6 of 9
For Julian Day 204,	selecting	COMIDA2	results # 6 of 9
For Julian Day 204,	selecting	COMIDA2	results # 6 of 9
For Julian Day 206,	selecting	COMIDA2	results # 6 of 9
For Julian Day 209,	selecting	COMIDA2	results # 6 of 9
For Julian Day 209,	selecting	COMIDA2	results # 6 of 9
For Julian Day 209,	selecting	COMIDA2	results # 6 of 9
For Julian Day 209,	selecting	COMIDA2	results # 6 of 9
For Julian Day 210,	selecting	COMIDA2	results # 6 of 9
For Julian Day 210,	selecting	COMIDA2	results # 6 of 9
For Julian Day 210,	selecting	COMIDA2	results # 6 of 9
For Julian Day 210,	selecting	COMIDA2	results # 6 of 9
For Julian Day 211,	selecting	COMIDA2	results # 6 of 9
For Julian Day 215,	selecting	COMIDA2	results # 6 of 9
For Julian Day 215,	selecting	COMIDA2	results # 6 of 9
For Julian Day 216,	selecting	COMIDA2	results # 6 of 9
For Julian Day 216,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 218,	selecting	COMIDA2	results # 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-341 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 281,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 281,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 289,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 297,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 301,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 302,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 304,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 309,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 313,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 314,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-342 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-343 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-344 of 1.4-801

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-345 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 81,	selecting COMIDA2 results	# 2 of 9
For Julian Day 84,	selecting COMIDA2 results	# 2 of 9
For Julian Day 85,	selecting COMIDA2 results	# 2 of 9
For Julian Day 86,	selecting COMIDA2 results	# 2 of 9
For Julian Day 87,	selecting COMIDA2 results	# 2 of 9
For Julian Day 89,	selecting COMIDA2 results	# 2 of 9
For Julian Day 90,	selecting COMIDA2 results	# 2 of 9
For Julian Day 91,	selecting COMIDA2 results	# 2 of 9
For Julian Day 94,	selecting COMIDA2 results	# 3 of 9
For Julian Day 95,	selecting COMIDA2 results	# 3 of 9
For Julian Day 96,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 109,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 112,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-346 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 114,	selecting	COMIDA2	results # 3 of 9
For Julian Day 116,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 117,	selecting	COMIDA2	results # 3 of 9
For Julian Day 123,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 124,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 125,	selecting	COMIDA2	results # 3 of 9
For Julian Day 127,	selecting	COMIDA2	results # 3 of 9
For Julian Day 128,	selecting	COMIDA2	results # 3 of 9
For Julian Day 128,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 130,	selecting	COMIDA2	results # 3 of 9
For Julian Day 131,	selecting	COMIDA2	results # 3 of 9
For Julian Day 132,	selecting	COMIDA2	results # 3 of 9
For Julian Day 132,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 141,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 143,	selecting	COMIDA2	results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-349 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-350 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 218,	selecting COMIDA2 results	# 6 of 9
For Julian Day 218,	selecting COMIDA2 results	# 6 of 9
For Julian Day 223,	selecting COMIDA2 results	# 7 of 9
For Julian Day 224,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 227,	selecting COMIDA2 results	# 7 of 9
For Julian Day 228,	selecting COMIDA2 results	# 7 of 9
For Julian Day 228,	selecting COMIDA2 results	# 7 of 9
For Julian Day 228,	selecting COMIDA2 results	# 7 of 9
For Julian Day 229,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 231,	selecting COMIDA2 results	# 7 of 9
For Julian Day 231,	selecting COMIDA2 results	# 7 of 9
For Julian Day 231,	selecting COMIDA2 results	# 7 of 9
For Julian Day 231,	selecting COMIDA2 results	# 7 of 9
For Julian Day 234,	selecting COMIDA2 results	# 7 of 9
For Julian Day 235,	selecting COMIDA2 results	# 7 of 9
For Julian Day 236,	selecting COMIDA2 results	# 7 of 9
For Julian Day 238,	selecting COMIDA2 results	# 7 of 9
For Julian Day 243,	selecting COMIDA2 results	# 7 of 9
For Julian Day 243,	selecting COMIDA2 results	# 7 of 9
For Julian Day 243,	selecting COMIDA2 results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-351 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting	COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-353 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-354 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-355 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-356 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-357 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 109,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 112,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 116,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 123,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 127,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 131,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-358 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 154,	selecting COMIDA2	results	# 4 of 9
For Julian Day 155,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 158,	selecting COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-359 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 168,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-360 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting	COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-363 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 275,	selecting	COMIDA2	results # 8 of 9
For Julian Day 276,	selecting	COMIDA2	results # 8 of 9
For Julian Day 276,	selecting	COMIDA2	results # 8 of 9
For Julian Day 277,	selecting	COMIDA2	results # 8 of 9
For Julian Day 278,	selecting	COMIDA2	results # 8 of 9
For Julian Day 280,	selecting	COMIDA2	results # 8 of 9
For Julian Day 281,	selecting	COMIDA2	results # 8 of 9
For Julian Day 281,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 285,	selecting	COMIDA2	results # 8 of 9
For Julian Day 285,	selecting	COMIDA2	results # 8 of 9
For Julian Day 289,	selecting	COMIDA2	results # 9 of 9
For Julian Day 292,	selecting	COMIDA2	results # 9 of 9
For Julian Day 292,	selecting	COMIDA2	results # 9 of 9
For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 297,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 301,	selecting	COMIDA2	results # 9 of 9
For Julian Day 302,	selecting	COMIDA2	results # 9 of 9
For Julian Day 304,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 313,	selecting	COMIDA2	results # 9 of 9
For Julian Day 314,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-364 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 330,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 331,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-365 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-366 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-367 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date
	Date
	Date

For Julian Day 69,	selecting COMIDA2	results # 2 of 9
For Julian Day 72,	selecting COMIDA2	results # 2 of 9
For Julian Day 74,	selecting COMIDA2	results # 2 of 9
For Julian Day 75,	selecting COMIDA2	results # 2 of 9
For Julian Day 76,	selecting COMIDA2	results # 2 of 9
For Julian Day 78,	selecting COMIDA2	results # 2 of 9
For Julian Day 79,	selecting COMIDA2	results # 2 of 9
For Julian Day 79,	selecting COMIDA2	results # 2 of 9
For Julian Day 80,	selecting COMIDA2	results # 2 of 9
For Julian Day 80,	selecting COMIDA2	results # 2 of 9
For Julian Day 81,	selecting COMIDA2	results # 2 of 9
For Julian Day 84,	selecting COMIDA2	results # 2 of 9
For Julian Day 85,	selecting COMIDA2	results # 2 of 9
For Julian Day 86,	selecting COMIDA2	results # 2 of 9
For Julian Day 87,	selecting COMIDA2	results # 2 of 9
For Julian Day 89,	selecting COMIDA2	results # 2 of 9
For Julian Day 90,	selecting COMIDA2	results # 2 of 9
For Julian Day 91,	selecting COMIDA2	results # 2 of 9
For Julian Day 94,	selecting COMIDA2	results # 3 of 9
For Julian Day 95,	selecting COMIDA2	results # 3 of 9
For Julian Day 96,	selecting COMIDA2	results # 3 of 9
For Julian Day 97,	selecting COMIDA2	results # 3 of 9
For Julian Day 97,	selecting COMIDA2	results # 3 of 9
For Julian Day 98,	selecting COMIDA2	results # 3 of 9
For Julian Day 98,	selecting COMIDA2	results # 3 of 9
For Julian Day 98,	selecting COMIDA2	results # 3 of 9
For Julian Day 99,	selecting COMIDA2	results # 3 of 9
For Julian Day 99,	selecting COMIDA2	results # 3 of 9
For Julian Day 100,	selecting COMIDA2	results # 3 of 9
For Julian Day 100,	selecting COMIDA2	results # 3 of 9
For Julian Day 102,	selecting COMIDA2	results # 3 of 9
For Julian Day 102,	selecting COMIDA2	results # 3 of 9
For Julian Day 104,	selecting COMIDA2	results # 3 of 9
For Julian Day 104,	selecting COMIDA2	results # 3 of 9
For Julian Day 104,	selecting COMIDA2	results # 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-368 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 109,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 112,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 116,	selecting COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9
For Julian Day 123,	selecting COMIDA2 results	# 3 of 9
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9
For Julian Day 127,	selecting COMIDA2 results	# 3 of 9
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 131,	selecting COMIDA2 results	# 3 of 9
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-369 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 141,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 143,	selecting	COMIDA2	results # 4 of 9
For Julian Day 144,	selecting	COMIDA2	results # 4 of 9
For Julian Day 146,	selecting	COMIDA2	results # 4 of 9
For Julian Day 146,	selecting	COMIDA2	results # 4 of 9
For Julian Day 147,	selecting	COMIDA2	results # 4 of 9
For Julian Day 148,	selecting	COMIDA2	results # 4 of 9
For Julian Day 149,	selecting	COMIDA2	results # 4 of 9
For Julian Day 152,	selecting	COMIDA2	results # 4 of 9
For Julian Day 152,	selecting	COMIDA2	results # 4 of 9
For Julian Day 152,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 154,	selecting	COMIDA2	results # 4 of 9
For Julian Day 155,	selecting	COMIDA2	results # 4 of 9
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 158,	selecting	COMIDA2	results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-371 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 177,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 185,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 189,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 198,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 200,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 202,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 206,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-372 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 211,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 218,	selecting COMIDA2 results	# 6 of 9
For Julian Day 218,	selecting COMIDA2 results	# 6 of 9
For Julian Day 223,	selecting COMIDA2 results	# 7 of 9
For Julian Day 224,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 227,	selecting COMIDA2 results	# 7 of 9
For Julian Day 228,	selecting COMIDA2 results	# 7 of 9
For Julian Day 228,	selecting COMIDA2 results	# 7 of 9
For Julian Day 228,	selecting COMIDA2 results	# 7 of 9
For Julian Day 229,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 231,	selecting COMIDA2 results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222
Rev. 2
Page 1.4-373 of 1.4-801
Date

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date
	Date
	Date

For Julian Day 231,	selecting COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-374 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting COMIDA2	results	# 8 of 9
For Julian Day 277,	selecting COMIDA2	results	# 8 of 9
For Julian Day 278,	selecting COMIDA2	results	# 8 of 9
For Julian Day 280,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 289,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 297,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-375 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 313,	selecting	COMIDA2	results # 9 of 9
For Julian Day 314,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 317,	selecting	COMIDA2	results # 9 of 9
For Julian Day 318,	selecting	COMIDA2	results # 9 of 9
For Julian Day 321,	selecting	COMIDA2	results # 9 of 9
For Julian Day 323,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 325,	selecting	COMIDA2	results # 9 of 9
For Julian Day 325,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 327,	selecting	COMIDA2	results # 9 of 9
For Julian Day 327,	selecting	COMIDA2	results # 9 of 9
For Julian Day 328,	selecting	COMIDA2	results # 9 of 9
For Julian Day 328,	selecting	COMIDA2	results # 9 of 9
For Julian Day 330,	selecting	COMIDA2	results # 9 of 9
For Julian Day 331,	selecting	COMIDA2	results # 9 of 9
For Julian Day 333,	selecting	COMIDA2	results # 9 of 9
For Julian Day 333,	selecting	COMIDA2	results # 9 of 9
For Julian Day 333,	selecting	COMIDA2	results # 9 of 9
For Julian Day 335,	selecting	COMIDA2	results # 1 of 9
For Julian Day 335,	selecting	COMIDA2	results # 1 of 9
For Julian Day 336,	selecting	COMIDA2	results # 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-376 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-377 of 1.4-801

Client PSEG Nuclear Development	<input checked="" type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

For Julian Day 16,	selecting COMIDA2 results # 1 of 9	results # 1 of 9
For Julian Day 18,	selecting COMIDA2 results # 1 of 9	results # 1 of 9
For Julian Day 19,	selecting COMIDA2 results # 1 of 9	results # 1 of 9
For Julian Day 20,	selecting COMIDA2 results # 1 of 9	results # 1 of 9
For Julian Day 23,	selecting COMIDA2 results # 1 of 9	results # 1 of 9
For Julian Day 24,	selecting COMIDA2 results # 1 of 9	results # 1 of 9
For Julian Day 24,	selecting COMIDA2 results # 1 of 9	results # 1 of 9
For Julian Day 25,	selecting COMIDA2 results # 1 of 9	results # 1 of 9
For Julian Day 25,	selecting COMIDA2 results # 1 of 9	results # 1 of 9
For Julian Day 25,	selecting COMIDA2 results # 1 of 9	results # 1 of 9
For Julian Day 26,	selecting COMIDA2 results # 1 of 9	results # 1 of 9
For Julian Day 33,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 33,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 36,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 37,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 39,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 40,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 42,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 42,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 43,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 44,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 44,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 46,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 47,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 47,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 48,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 48,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 53,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 53,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 55,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 62,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 62,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 63,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 64,	selecting COMIDA2 results # 2 of 9	results # 2 of 9
For Julian Day 64,	selecting COMIDA2 results # 2 of 9	results # 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-378 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-379 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 102,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 109,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 112,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 116,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 123,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 127,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.4-380 of 1.4-801

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

For Julian Day 130, selecting COMIDA2 results # 3 of 9
 For Julian Day 131, selecting COMIDA2 results # 3 of 9
 For Julian Day 132, selecting COMIDA2 results # 3 of 9
 For Julian Day 132, selecting COMIDA2 results # 3 of 9
 For Julian Day 133, selecting COMIDA2 results # 3 of 9
 For Julian Day 133, selecting COMIDA2 results # 3 of 9
 For Julian Day 133, selecting COMIDA2 results # 3 of 9
 For Julian Day 133, selecting COMIDA2 results # 3 of 9
 For Julian Day 133, selecting COMIDA2 results # 3 of 9
 For Julian Day 133, selecting COMIDA2 results # 3 of 9
 For Julian Day 137, selecting COMIDA2 results # 4 of 9
 For Julian Day 137, selecting COMIDA2 results # 4 of 9
 For Julian Day 141, selecting COMIDA2 results # 4 of 9
 For Julian Day 142, selecting COMIDA2 results # 4 of 9
 For Julian Day 142, selecting COMIDA2 results # 4 of 9
 For Julian Day 143, selecting COMIDA2 results # 4 of 9
 For Julian Day 144, selecting COMIDA2 results # 4 of 9
 For Julian Day 146, selecting COMIDA2 results # 4 of 9
 For Julian Day 146, selecting COMIDA2 results # 4 of 9
 For Julian Day 147, selecting COMIDA2 results # 4 of 9
 For Julian Day 148, selecting COMIDA2 results # 4 of 9
 For Julian Day 149, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 152, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 153, selecting COMIDA2 results # 4 of 9
 For Julian Day 154, selecting COMIDA2 results # 4 of 9
 For Julian Day 155, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 156, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9
 For Julian Day 157, selecting COMIDA2 results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-382 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-383 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 209,	selecting	COMIDA2	results # 6 of 9
For Julian Day 209,	selecting	COMIDA2	results # 6 of 9
For Julian Day 209,	selecting	COMIDA2	results # 6 of 9
For Julian Day 209,	selecting	COMIDA2	results # 6 of 9
For Julian Day 210,	selecting	COMIDA2	results # 6 of 9
For Julian Day 210,	selecting	COMIDA2	results # 6 of 9
For Julian Day 210,	selecting	COMIDA2	results # 6 of 9
For Julian Day 210,	selecting	COMIDA2	results # 6 of 9
For Julian Day 210,	selecting	COMIDA2	results # 6 of 9
For Julian Day 211,	selecting	COMIDA2	results # 6 of 9
For Julian Day 215,	selecting	COMIDA2	results # 6 of 9
For Julian Day 215,	selecting	COMIDA2	results # 6 of 9
For Julian Day 216,	selecting	COMIDA2	results # 6 of 9
For Julian Day 216,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
For Julian Day 218,	selecting	COMIDA2	results # 6 of 9
For Julian Day 218,	selecting	COMIDA2	results # 6 of 9
For Julian Day 223,	selecting	COMIDA2	results # 7 of 9
For Julian Day 224,	selecting	COMIDA2	results # 7 of 9
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9
For Julian Day 227,	selecting	COMIDA2	results # 7 of 9
For Julian Day 228,	selecting	COMIDA2	results # 7 of 9
For Julian Day 228,	selecting	COMIDA2	results # 7 of 9
For Julian Day 228,	selecting	COMIDA2	results # 7 of 9
For Julian Day 229,	selecting	COMIDA2	results # 7 of 9
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-384 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting	COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-386 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-387 of 1.4-801

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

Equip. No.	Client	Project	Proj. No	Safety Related	Non-Safety Related	Prepared by	Reviewed by	Approved by
	For Julian Day 333,	selecting	COMIDA2	results # 9 of 9				
	For Julian Day 333,	selecting	COMIDA2	results # 9 of 9				
	For Julian Day 335,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 335,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 336,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 336,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 338,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 338,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 342,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 342,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 343,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 344,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 344,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 344,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 344,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 344,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 344,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 345,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 345,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 346,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 349,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 349,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 350,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 352,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 353,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 353,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 356,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 358,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 358,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 363,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 365,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 365,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 2,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 3,	selecting	COMIDA2	results # 1 of 9				
	For Julian Day 5,	selecting	COMIDA2	results # 1 of 9				



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-388 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-389 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 62,	selecting COMIDA2 results	# 2 of 9
For Julian Day 62,	selecting COMIDA2 results	# 2 of 9
For Julian Day 63,	selecting COMIDA2 results	# 2 of 9
For Julian Day 64,	selecting COMIDA2 results	# 2 of 9
For Julian Day 64,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 68,	selecting COMIDA2 results	# 2 of 9
For Julian Day 69,	selecting COMIDA2 results	# 2 of 9
For Julian Day 72,	selecting COMIDA2 results	# 2 of 9
For Julian Day 74,	selecting COMIDA2 results	# 2 of 9
For Julian Day 75,	selecting COMIDA2 results	# 2 of 9
For Julian Day 76,	selecting COMIDA2 results	# 2 of 9
For Julian Day 78,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 81,	selecting COMIDA2 results	# 2 of 9
For Julian Day 84,	selecting COMIDA2 results	# 2 of 9
For Julian Day 85,	selecting COMIDA2 results	# 2 of 9
For Julian Day 86,	selecting COMIDA2 results	# 2 of 9
For Julian Day 87,	selecting COMIDA2 results	# 2 of 9
For Julian Day 89,	selecting COMIDA2 results	# 2 of 9
For Julian Day 90,	selecting COMIDA2 results	# 2 of 9
For Julian Day 91,	selecting COMIDA2 results	# 2 of 9
For Julian Day 94,	selecting COMIDA2 results	# 3 of 9
For Julian Day 95,	selecting COMIDA2 results	# 3 of 9
For Julian Day 96,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9



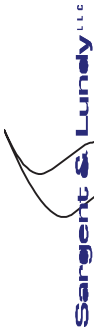
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.4-390 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 109,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-395 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

L-EDEWBODY 05 225	TOT LIF	0-16.1 km	0.1006	8.06E-05	0.00E+00	2.91E-06	1.84E-04	2.56E-03	3.51E-03	2.80E-02	1.39E-
L-EDEWBODY 04 333	TOT LIF	0-80.5 km	1.0000	7.65E+01	4.07E+01	2.03E+02	2.44E+02	3.42E+02	3.81E+02	5.44E+02	8.94E-

POPULATION WEIGHTED RISK

ERL FAT/TOTAL 0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 333	0-80.5 km	1.0000	5.75E-07	3.09E-07	1.39E-06	1.84E-06	2.61E-06	2.97E-06	4.14E-06	8.94E-	
CAN FAT/TOTAL 05 225	0-16.1 km	0.1006	9.11E-11	0.00E+00	2.91E-12	2.15E-10	2.65E-09	4.03E-09	3.17E-08	1.39E-	

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 03 345	0-1.6 km	0.5242	3.53E-05	3.44E-06	1.02E-04	1.27E-04	2.11E-04	2.61E-04	3.36E-04	3.17E-	
----------------------	----------	--------	----------	----------	----------	----------	----------	----------	----------	--------	--



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-397 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 211	0-16.1 km	1.0000	6.57E+00	3.45E+00	1.59E+01	2.28E+01	4.47E+01	5.81E+01	1.00E+02	6.66E-
L-EDEWBODY TOT LIF 04 333	0-80.5 km	1.0000	8.30E+01	4.72E+01	2.09E+02	2.53E+02	3.49E+02	3.87E+02	5.64E+02	8.94E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 333	0-80.5 km	1.0000	6.25E-07	3.52E-07	1.47E-06	1.99E-06	2.67E-06	3.02E-06	4.30E-06	8.94E-
CAN FAT/TOTAL 05 211	0-16.1 km	1.0000	6.66E-06	3.47E-06	1.62E-05	2.32E-05	4.53E-05	5.87E-05	1.03E-04	6.66E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 211	0-1.6 km	1.0000	3.32E-02	2.56E-02	6.09E-02	7.83E-02	1.17E-01	1.33E-01	1.82E-01	8.75E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-398 of 1.4-801		

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

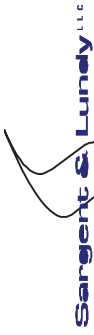
SOURCE TERM 1 OF 23:
RC101

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 19:24:48	PAGE 4	PROB	QUANTILES					PEAK	PEAK
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	
TRIAL									
HEALTH EFFECTS CASES									
CAN FAT/TOTAL	0-80.5 km	1.0000	2.36E+01	1.40E+01	5.67E+01	7.13E+01	1.04E+02	1.21E+02	2.00E+02 4.85E-
04 85									
CAN FAT/TOTAL	0-16.1 km	1.0000	1.94E+00	1.13E+00	4.62E+00	6.15E+00	1.19E+01	1.49E+01	3.23E+01 1.79E-
04 217									
POPULATION DOSE (Sv)									
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	4.17E+01	2.43E+01	1.00E+02	1.36E+02	2.79E+02	3.36E+02	7.10E+02 1.79E-
04 217									
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	5.13E+02	3.04E+02	1.19E+03	1.47E+03	2.33E+03	2.79E+03	4.39E+03 4.85E-
04 85									
POPULATION WEIGHTED RISK									
CAN FAT/TOTAL	0-80.5 km	1.0000	2.67E-06	1.44E-06	6.91E-06	8.50E-06	1.21E-05	1.38E-05	2.41E-05 4.85E-
04 85									
CAN FAT/TOTAL	0-16.1 km	1.0000	2.76E-05	1.37E-05	6.90E-05	9.47E-05	2.01E-04	2.47E-04	5.26E-04 1.79E-
04 217									

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.4-400 of 1.4-801		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 05 352	1.0000	4.33E-01	3.36E-01	9.23E-01	1.06E+00	1.30E+00	1.42E+00	2.53E+00	1.33E-
INGESTION OF OTHER MEAT CROPS 04 217	1.0000	9.41E-02	8.45E-02	1.57E-01	1.96E-01	2.72E-01	3.07E-01	4.58E-01	1.64E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 85	1.0000	5.13E+02	3.04E+02	1.19E+03	1.47E+03	2.33E+03	2.79E+03	4.39E+03	4.85E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 85	1.0000	4.79E+02	2.66E+02	1.16E+03	1.41E+03	2.19E+03	2.55E+03	4.32E+03	4.85E-
TOTAL INGESTION PATHWAYS DOSE 04 85	1.0000	3.37E+01	2.31E+01	7.75E+01	9.74E+01	1.31E+02	1.49E+02	2.15E+02	3.42E-
LONG-TERM GROUNDSHINE DOSE 04 85	1.0000	3.94E+02	2.15E+02	1.01E+03	1.20E+03	1.76E+03	2.06E+03	3.55E+03	4.85E-
LONG-TERM RESUSPENSION DOSE 04 85	1.0000	8.50E+01	4.67E+01	2.17E+02	2.70E+02	4.03E+02	4.74E+02	7.66E+02	4.85E-
WATER INGESTION DOSE 04 217	1.0000	3.25E-01	2.37E-01	6.58E-01	8.40E-01	1.15E+00	1.27E+00	2.02E+00	1.64E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-404 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 6

SOURCE TERM 1 OF 23:
RC101

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	1.00E-12	1.00E-08	1.00E-08
2.00E-08	2.00E-12	2.00E-08	2.00E-08
3.00E-08	3.00E-12	3.00E-08	3.00E-08
5.00E-08	5.00E-12	5.00E-08	5.00E-08
7.00E-08	7.00E-12	7.00E-08	7.00E-08
1.00E-07	1.00E-11	1.00E-07	1.00E-07
2.00E-07	2.00E-11	2.00E-07	2.00E-07
3.00E-07	3.00E-11	3.00E-07	3.00E-07
5.00E-07	5.00E-11	5.00E-07	5.00E-07
7.00E-07	7.00E-11	7.00E-07	7.00E-07
1.00E-06	1.00E-10	1.00E-06	1.00E-06
2.00E-06	2.00E-10	2.00E-06	2.00E-06
3.00E-06	3.00E-10	3.00E-06	3.00E-06
5.00E-06	5.00E-10	5.00E-06	5.00E-06
7.00E-06	7.00E-10	7.00E-06	7.00E-06
1.00E-05	1.00E-09	1.00E-05	1.00E-05
2.00E-05	2.00E-09	2.00E-05	2.00E-05
3.00E-05	3.00E-09	3.00E-05	3.00E-05
5.00E-05	5.00E-09	5.00E-05	5.00E-05
7.00E-05	7.00E-09	7.00E-05	7.00E-05
1.00E-04	1.00E-08	1.00E-04	1.00E-04
2.00E-04	2.00E-08	2.00E-04	2.00E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 2 OF 23:
 RC201

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION

10-JAN-10 19:24:48	PAGE 8	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	3.59E+02	9.83E+01	1.08E+03	1.50E+03	2.79E+03	3.24E+03	7.85E+03	1.33E-
04 345										
CAN FAT/TOTAL	0-16.1 km	0.4646	8.16E-01	0.00E+00	6.63E-01	3.38E+00	1.94E+01	3.04E+01	3.00E+02	1.56E-
05 225										
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0001	1.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E+01	1.39E-
05 225										
EARLY dose L-EDEWBODY > 0.250 Sv	0.2626	2.63E+03	0.00E+00	4.03E+03	2.21E+04	4.21E+04	5.87E+04	3.17E+05	1.33E-	
04 345										

POPULATION DOSE (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-413 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

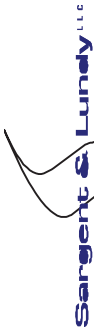
	Safety Related	X	Non-Safety Related						
L-EDEWBODY TOT LIF 05 225	0-16.1 km	0.4646	1.36E+01	0.00E+00	1.27E+01	5.50E+01	2.53E+02	4.73E+03	1.56E-
L-EDEWBODY TOT LIF 04 345	0-80.5 km	1.0000	7.95E+03	2.23E+03	2.37E+04	3.44E+04	5.87E+04	6.91E+04	1.41E+05

POPULATION WEIGHTED RISK

ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 345	0-80.5 km	1.0000	4.41E-05	1.18E-05	1.26E-04	1.92E-04	3.33E-04	3.87E-04	9.65E-04
CAN FAT/TOTAL 05 225	0-16.1 km	0.4646	1.34E-05	0.00E+00	1.03E-05	5.51E-05	3.48E-04	4.92E-03	1.56E-

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 04 224	0-1.6 km	0.8459	4.36E-01	1.71E-02	9.29E-01	1.68E+00	9.11E+00	1.07E+01	1.45E+01	3.61E-
----------------------	----------	--------	----------	----------	----------	----------	----------	----------	----------	--------



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page 1.4-415 of 1.4-801		

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 06 27	0-16.1 km	1.0000	1.43E+02	8.98E+00	4.13E+02	6.24E+02	1.47E+03	2.08E+03	1.05E+04	6.46E-
L-EDEWBODY 04 345	0-80.5 km	1.0000	8.08E+03	2.39E+03	2.39E+04	3.46E+04	5.87E+04	6.91E+04	1.42E+05	1.33E-

POPULATION WEIGHTED RISK

ERL FAT/TOTAL 06 214	0-80.5 km	0.0060	2.70E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E-10	1.66E-06	5.74E-
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL 06 214	3.2-4.8 km	0.0047	9.61E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.94E-02	5.74E-
CAN FAT/TOTAL 04 345	0-80.5 km	1.0000	4.50E-05	1.30E-05	1.27E-04	1.94E-04	3.34E-04	3.90E-04	9.71E-04	1.33E-
CAN FAT/TOTAL 06 27	0-16.1 km	1.0000	1.34E-04	6.60E-06	3.78E-04	6.00E-04	1.48E-03	2.12E-03	1.36E-02	6.46E-

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 04 339	0-1.6 km	1.0000	8.65E-01	2.19E-01	1.59E+00	3.03E+00	1.43E+01	1.96E+01	3.66E+01	3.61E-
----------------------	----------	--------	----------	----------	----------	----------	----------	----------	----------	--------



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-416	of	1.4-801

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

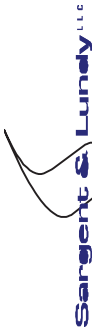
SOURCE TERM 2 OF 23:
 RC201

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 19:24:48	PAGE 10	PROB	QUANTILES					PEAK	PEAK
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	
TRIAL									
HEALTH EFFECTS CASES									
CAN FAT/TOTAL	0-80.5 km	1.0000	1.32E+03	5.32E+02	3.47E+03	8.79E+03	1.02E+04	1.81E+04	1.57E-
04 30									
CAN FAT/TOTAL	0-16.1 km	0.8960	1.17E+01	1.54E+00	3.30E+01	4.85E+01	1.34E+02	6.12E+02	5.90E-
06 27									
POPULATION DOSE (Sv)									
L-EDEWBODY TOT LIF	0-16.1 km	0.8960	2.58E+02	3.34E+01	7.32E+02	2.22E+03	2.97E+03	1.24E+04	5.90E-
06 27									
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	2.98E+04	1.20E+04	8.03E+04	1.14E+05	1.89E+05	4.10E+05	1.57E-
04 30									
POPULATION WEIGHTED RISK									
CAN FAT/TOTAL	0-80.5 km	1.0000	1.18E-04	4.58E-05	3.27E-04	5.10E-04	8.22E-04	1.24E-03	1.57E-
04 30									
CAN FAT/TOTAL	0-16.1 km	0.7478	9.33E-05	6.20E-07	3.04E-04	4.42E-04	1.06E-03	1.97E-03	9.51E-
06 153									

PEAK DOSE FOUND ON SPATIAL GRID (SV)



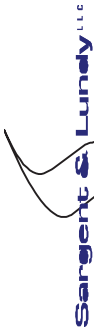
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.4-417 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 03 262	0-1.6 km	0.6261	2.68E-02	6.00E-02	9.60E-02	1.04E-01	1.15E-01	1.20E-01	1.22E-01	3.82E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 06 27	0-16.1 km	0.8960	2.58E+02	3.34E+01	7.32E+02	1.02E+03	2.22E+03	2.97E+03	1.24E+04	5.90E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 06 153		0.7478	1.29E+02	8.60E-01	4.02E+02	6.10E+02	1.13E+03	1.48E+03	2.73E+03	9.51E-
TOTAL INGESTION PATHWAYS DOSE 06 27		0.8960	5.59E+01	5.20E+00	1.03E+02	2.77E+02	8.25E+02	1.45E+03	1.24E+04	5.90E-
LONG-TERM GROUNDSHINE DOSE 06 153		0.7478	1.29E+02	8.60E-01	4.02E+02	6.10E+02	1.13E+03	1.48E+03	2.72E+03	9.51E-
LONG-TERM RESUSPENSION DOSE 05 362		0.7478	1.45E-01	4.52E-04	2.76E-01	7.85E-01	2.61E+00	3.70E+00	9.57E+00	5.71E-
WATER INGESTION DOSE 06 27		0.7420	5.38E+01	1.48E+00	1.01E+02	2.69E+02	8.25E+02	1.45E+03	1.24E+04	5.90E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 228		0.5352	6.97E+01	4.40E-01	2.31E+02	3.54E+02	6.83E+02	9.80E+02	2.53E+03	1.90E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 104		0.5637	3.34E+00	3.63E-01	9.81E+00	1.17E+01	1.75E+01	2.03E+01	3.07E+01	4.92E-
INGESTION OF GRAINS 04 363		0.8507	7.52E-02	1.70E-02	1.91E-01	2.98E-01	7.59E-01	1.13E+00	1.84E+00	8.75E-
INGESTION OF LEAF VEG 05 117		0.8507	2.22E-01	6.00E-02	6.43E-01	9.64E-01	1.43E+00	1.68E+00	2.50E+00	1.52E-
INGESTION OF ROOT CROPS 04 363		0.8507	1.39E-01	3.32E-02	3.68E-01	5.85E-01	1.15E+00	1.65E+00	2.55E+00	8.75E-
INGESTION OF FRUITS 05 117		0.8507	5.93E-01	1.49E-01	1.76E+00	2.57E+00	3.81E+00	4.33E+00	6.96E+00	1.52E-
INGESTION OF LEGUMES 05 117		0.8507	2.59E-01	6.66E-02	7.37E-01	1.08E+00	1.63E+00	1.94E+00	2.95E+00	1.52E-
INGESTION OF BEEF 04 292		0.8507	3.93E-01	9.38E-02	1.07E+00	1.55E+00	2.92E+00	3.63E+00	6.95E+00	1.05E-
INGESTION OF MILK 04 292		0.8507	2.76E-01	7.46E-02	7.99E-01	1.15E+00	2.02E+00	2.42E+00	4.60E+00	1.05E-



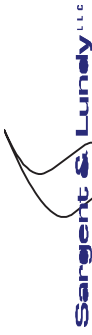
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-418 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related				
INGESTION OF POULTRY 04 363	0.8507		1.34E-01	3.52E-02	3.44E-01	5.27E-01	1.25E+00
INGESTION OF OTHER MEAT CROPS 04 363	0.8507		1.91E-02	5.28E-03	5.05E-02	7.56E-02	1.89E-01
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km							
TOTAL LONG-TERM PATHWAYS DOSE 04 30	1.0000		2.98E+04	1.20E+04	8.03E+04	1.14E+05	1.89E+05
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 30	1.0000		2.18E+04	8.65E+03	6.18E+04	9.48E+04	1.28E+05
TOTAL INGESTION PATHWAYS DOSE 06 25	1.0000		6.35E+02	3.23E+02	1.48E+03	2.39E+03	5.36E+03
LONG-TERM GROUNDSHINE DOSE 04 30	1.0000		2.17E+04	8.57E+03	6.17E+04	9.46E+04	1.28E+05
LONG-TERM RESUSPENSION DOSE 05 288	1.0000		7.69E+01	2.56E+01	2.37E+02	3.57E+02	5.54E+02
WATER INGESTION DOSE 06 25	1.0000		5.48E+02	1.98E+02	1.39E+03	2.32E+03	5.26E+03

1.87E+00 2.78E+00 8.75E-
2.58E-01 3.84E-01 8.75E-
2.21E+05 4.10E+05 1.57E-
1.44E+05 2.30E+05 1.57E-
6.69E+03 1.80E+04 7.64E-
1.44E+05 2.30E+05 1.57E-
6.08E+02 1.38E+03 1.90E-
6.64E+03 1.80E+04 7.64E-



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related	Rev. 2	Date
			Page 1.4-420 of 1.4-801	
Client PSEG Nuclear Development				
Project PSEG ESPA				
Proj. No 12380-001 Equip. No.				
Prepared by			Date	
Reviewed by			Date	
Approved by			Date	

POP.-DEPENDENT DECONTAMINATION COST 05 288	0.8450	5.67E+09	1.70E+09	1.77E+10	2.75E+10	3.24E+10	3.36E+10	4.53E+10	1.90E-
FARM-DEPENDENT DECONTAMINATION COST 04 288	0.8506	6.69E+07	5.29E+07	1.14E+08	1.26E+08	1.59E+08	1.75E+08	2.81E+08	1.52E-
POP.-DEPENDENT INTERDICTION COST 04 30	0.8450	2.66E+10	8.69E+09	7.35E+10	1.04E+11	2.11E+11	2.65E+11	5.05E+11	1.57E-
FARM-DEPENDENT INTERDICTION COST 05 60	0.9754	1.28E+08	1.02E+08	2.61E+08	3.21E+08	4.49E+08	5.07E+08	7.51E+08	2.47E-
POP.-DEPENDENT CONDEMNATION COST 05 162	0.1402	2.07E+09	0.00E+00	8.26E+08	5.79E+09	5.81E+10	6.90E+10	5.38E+11	1.08E-
FARM-DEPENDENT CONDEMNATION COST 04 24	0.2621	7.69E+06	0.00E+00	4.85E+06	7.04E+07	1.63E+08	2.14E+08	6.24E+08	2.29E-
EMERGENCY PHASE COST 05 60	0.8435	1.31E+08	4.35E+07	4.42E+08	6.46E+08	7.46E+08	7.70E+08	1.14E+09	1.46E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 03 60	0.9540	2.49E+06	7.88E+05	1.02E+07	1.18E+07	1.63E+07	1.88E+07	2.79E+07	2.70E-
CROP DISPOSAL COST 03 60	0.9757	8.52E+07	7.36E+07	1.34E+08	1.64E+08	2.61E+08	3.37E+08	4.85E+08	2.70E-
AFFECTED AREA/POPULATION FARM DECONTAMINATION (HECTARES) 04 288	0.8506	2.84E+04	2.30E+04	5.75E+04	6.77E+04	8.06E+04	8.61E+04	1.60E+05	1.52E-
POP. DECONTAMINATION (INDIVIDUALS) 05 288	0.8450	3.79E+05	1.55E+05	1.17E+06	1.88E+06	2.22E+06	2.33E+06	3.95E+06	1.90E-
FARM INTERDICTION (HECTARES) 03 60	0.9754	3.41E+04	2.60E+04	6.29E+04	7.57E+04	1.14E+05	1.36E+05	2.06E+05	1.09E-
POP. INTERDICTION (INDIVIDUALS) 05 288	0.8450	3.79E+05	1.55E+05	1.17E+06	1.88E+06	2.22E+06	2.33E+06	3.95E+06	1.90E-
FARM CONDEMNATION (HECTARES) 04 24	0.2621	4.73E+02	0.00E+00	4.50E+02	3.61E+03	8.92E+03	1.30E+04	2.86E+04	1.63E-
POP. CONDEMNATION (INDIVIDUALS) 05 162	0.1402	7.21E+03	0.00E+00	2.69E+03	2.21E+04	1.75E+05	2.44E+05	2.00E+06	1.08E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-422 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
	Date
	Date
	Date

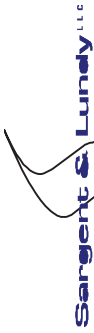
MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 12

SOURCE TERM 2 OF 23:
RC201

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-07	1.00E-07	1.00E-07	1.00E-09
2.00E-07	2.00E-07	2.00E-07	2.00E-09
3.00E-07	3.00E-07	3.00E-07	3.00E-09
5.00E-07	5.00E-07	5.00E-07	5.00E-09
7.00E-07	7.00E-07	7.00E-07	7.00E-09
1.00E-06	1.00E-06	1.00E-06	1.00E-08
2.00E-06	2.00E-06	2.00E-06	2.00E-08
3.00E-06	3.00E-06	3.00E-06	3.00E-08
5.00E-06	5.00E-06	5.00E-06	5.00E-08
7.00E-06	7.00E-06	7.00E-06	7.00E-08
1.00E-05	1.00E-05	1.00E-05	1.00E-07
2.00E-05	2.00E-05	2.00E-05	2.00E-07
3.00E-05	3.00E-05	3.00E-05	3.00E-07
5.00E-05	5.00E-05	5.00E-05	5.00E-07
7.00E-05	7.00E-05	7.00E-05	7.00E-07
1.00E-04	1.00E-04	1.00E-04	1.00E-06
2.00E-04	2.00E-04	2.00E-04	2.00E-06
3.00E-04	3.00E-04	3.00E-04	3.00E-06
5.00E-04	5.00E-04	5.00E-04	5.00E-06
7.00E-04	7.00E-04	7.00E-04	7.00E-06
1.00E-03	1.00E-03	1.00E-03	1.00E-05
2.00E-03	2.00E-03	2.00E-03	2.00E-05
3.00E-03	3.00E-03	3.00E-03	3.00E-05
5.00E-03	5.00E-03	5.00E-03	5.00E-05
7.00E-03	7.00E-03	7.00E-03	7.00E-05
1.00E-02	1.00E-02	1.00E-02	1.00E-04
2.00E-02	2.00E-02	2.00E-02	2.00E-04
3.00E-02	3.00E-02	3.00E-02	3.00E-04
5.00E-02	5.00E-02	5.00E-02	5.00E-04
7.00E-02	7.00E-02	7.00E-02	7.00E-04
1.00E-01	1.00E-01	1.00E-01	1.00E-03
2.00E-01	2.00E-01	2.00E-01	2.00E-03
3.00E-01	3.00E-01	3.00E-01	3.00E-03
5.00E-01	5.00E-01	5.00E-01	5.00E-03
7.00E-01	7.00E-01	7.00E-01	7.00E-03
1.00E+00	1.00E+00	1.00E+00	1.00E-02
2.00E+00	2.00E+00	2.00E+00	2.00E-02
3.00E+00	3.00E+00	3.00E+00	3.00E-02
5.00E+00	5.00E+00	5.00E+00	5.00E-02
7.00E+00	7.00E+00	7.00E+00	7.00E-02
1.00E+01	1.00E+01	1.00E+01	1.00E-01
2.00E+01	2.00E+01	2.00E+01	2.00E-01
3.00E+01	3.00E+01	3.00E+01	3.00E-01
5.00E+01	5.00E+01	5.00E+01	5.00E-01
7.00E+01	7.00E+01	7.00E+01	7.00E-01
1.00E+02	1.00E+02	1.00E+02	1.00E-00
2.00E+02	2.00E+02	2.00E+02	2.00E-00
3.00E+02	3.00E+02	3.00E+02	3.00E-00
5.00E+02	5.00E+02	5.00E+02	5.00E-00
7.00E+02	7.00E+02	7.00E+02	7.00E-00
1.00E+03	1.00E+03	1.00E+03	1.00E+00
2.00E+03	2.00E+03	2.00E+03	2.00E+00
3.00E+03	3.00E+03	3.00E+03	3.00E+00
5.00E+03	5.00E+03	5.00E+03	5.00E+00
7.00E+03	7.00E+03	7.00E+03	7.00E+00
1.00E+04	1.00E+04	1.00E+04	1.00E+01
2.00E+04	2.00E+04	2.00E+04	2.00E+01
3.00E+04	3.00E+04	3.00E+04	3.00E+01
5.00E+04	5.00E+04	5.00E+04	5.00E+01
7.00E+04	7.00E+04	7.00E+04	7.00E+01
1.00E+05	1.00E+05	1.00E+05	1.00E+02
2.00E+05	2.00E+05	2.00E+05	2.00E+02
3.00E+05	3.00E+05	3.00E+05	3.00E+02
5.00E+05	5.00E+05	5.00E+05	5.00E+02
7.00E+05	7.00E+05	7.00E+05	7.00E+02
1.00E+06	1.00E+06	1.00E+06	1.00E+03
2.00E+06	2.00E+06	2.00E+06	2.00E+03
3.00E+06	3.00E+06	3.00E+06	3.00E+03
5.00E+06	5.00E+06	5.00E+06	5.00E+03
7.00E+06	7.00E+06	7.00E+06	7.00E+03
1.00E+07	1.00E+07	1.00E+07	1.00E+04
2.00E+07	2.00E+07	2.00E+07	2.00E+04
3.00E+07	3.00E+07	3.00E+07	3.00E+04
5.00E+07	5.00E+07	5.00E+07	5.00E+04
7.00E+07	7.00E+07	7.00E+07	7.00E+04
1.00E+08	1.00E+08	1.00E+08	1.00E+05
2.00E+08	2.00E+08	2.00E+08	2.00E+05
3.00E+08	3.00E+08	3.00E+08	3.00E+05
5.00E+08	5.00E+08	5.00E+08	5.00E+05
7.00E+08	7.00E+08	7.00E+08	7.00E+05
1.00E+09	1.00E+09	1.00E+09	1.00E+06
2.00E+09	2.00E+09	2.00E+09	2.00E+06
3.00E+09	3.00E+09	3.00E+09	3.00E+06
5.00E+09	5.00E+09	5.00E+09	5.00E+06
7.00E+09	7.00E+09	7.00E+09	7.00E+06
1.00E+10	1.00E+10	1.00E+10	1.00E+07
2.00E+10	2.00E+10	2.00E+10	2.00E+07
3.00E+10	3.00E+10	3.00E+10	3.00E+07
5.00E+10	5.00E+10	5.00E+10	5.00E+07
7.00E+10	7.00E+10	7.00E+10	7.00E+07
1.00E+11	1.00E+11	1.00E+11	1.00E+08
2.00E+11	2.00E+11	2.00E+11	2.00E+08
3.00E+11	3.00E+11	3.00E+11	3.00E+08
5.00E+11	5.00E+11	5.00E+11	5.00E+08
7.00E+11	7.00E+11	7.00E+11	7.00E+08
1.00E+12	1.00E+12	1.00E+12	1.00E+09
2.00E+12	2.00E+12	2.00E+12	2.00E+09
3.00E+12	3.00E+12	3.00E+12	3.00E+09
5.00E+12	5.00E+12	5.00E+12	5.00E+09
7.00E+12	7.00E+12	7.00E+12	7.00E+09



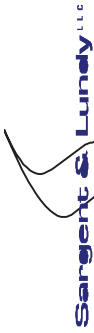
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page 1.4-431 of 1.4-801		

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 05 224	TOT LIF 0-16.1 km	0.4681	3.16E-01	0.00E+00	7.09E-01	1.69E+00	5.84E+00	1.01E+01	7.86E+01	2.04E-
L-EDEWBODY 06 210	TOT LIF 0-80.5 km	1.0000	5.10E+03	1.90E+03	1.43E+04	2.08E+04	3.06E+04	3.20E+04	4.73E+04	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 249	0-80.5 km	1.0000	3.75E-05	1.27E-05	1.09E-04	1.49E-04	2.46E-04	2.87E-04	4.45E-04	1.52E-
CAN FAT/TOTAL 05 224	0-16.1 km	0.4681	2.97E-07	0.00E+00	6.50E-07	1.57E-06	5.58E-06	1.01E-05	7.38E-05	2.04E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 03 252	0-1.6 km	0.8459	1.89E-02	1.50E-03	4.35E-02	8.24E-02	1.54E-01	1.94E-01	3.46E-01	3.17E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-433 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 05 227	TOT LIF 0-16.1 km	1.0000	1.44E+02	3.69E+01	4.07E+02	5.88E+02	1.27E+03	1.75E+03	4.41E+03	6.66E-
L-EDEWBODY 06 210	TOT LIF 0-80.5 km	1.0000	5.24E+03	2.02E+03	1.45E+04	2.09E+04	3.07E+04	3.21E+04	4.88E+04	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 249	0-80.5 km	1.0000	3.88E-05	1.38E-05	1.11E-04	1.51E-04	2.48E-04	2.88E-04	4.46E-04	1.52E-
CAN FAT/TOTAL 05 227	0-16.1 km	1.0000	1.80E-04	3.49E-05	5.12E-04	7.57E-04	1.68E-03	2.36E-03	6.77E-03	6.66E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 370	0-1.6 km	1.0000	6.59E-01	3.35E-01	2.05E+00	2.84E+00	5.51E+00	6.57E+00	1.03E+01	1.14E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-434 of		1.4-801

Client	PSEG Nuclear Development	Prepared by	
Project	PSEG ESPA	Reviewed by	
Proj. No	12380-001	Approved by	
	Equip. No.	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 3 OF 23:
RC202

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10	19:24:48	PAGE	16	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	PEAK	PEAK
QUANTILES												
TRIAL												
HEALTH EFFECTS CASES												
CAN FAT/TOTAL	0-80.5 km	1.0000	1.14E+03	5.33E+02	3.13E+03	4.07E+03	5.82E+03	6.42E+03	9.92E+03	1.19E-		
04 250												
CAN FAT/TOTAL	0-16.1 km	0.9473	1.66E+01	7.72E+00	4.14E+01	5.92E+01	1.05E+02	1.23E+02	2.62E+02	5.38E-		
05 183												
POPULATION DOSE (SV)												
L-EDEWBODY TOT LIF	0-16.1 km	0.9473	3.75E+02	1.78E+02	9.59E+02	1.30E+03	2.45E+03	3.05E+03	5.98E+03	5.38E-		
05 183												
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	2.56E+04	1.18E+04	7.08E+04	9.56E+04	1.28E+05	1.44E+05	2.24E+05	1.19E-		
04 250												
POPULATION WEIGHTED RISK												
CAN FAT/TOTAL	0-80.5 km	1.0000	1.26E-04	5.65E-05	3.43E-04	4.83E-04	7.02E-04	7.43E-04	1.06E-03	1.19E-		
04 250												
CAN FAT/TOTAL	0-16.1 km	0.9108	1.94E-04	8.93E-05	5.11E-04	7.11E-04	1.13E-03	1.23E-03	2.09E-03	6.46E-		
06 164												

PEAK DOSE FOUND ON SPATIAL GRID (SV)



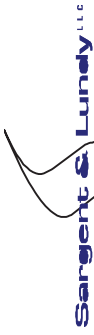
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.4-435 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related								
L-EDEWBODY 04 367	0-1.6 km		0.8146	5.94E-02	6.12E-02	1.03E-01	1.05E-01	1.10E-01	1.12E-01	1.23E-01	2.19E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 183	0-16.1 km		0.9473	3.75E+02	1.78E+02	9.59E+02	1.30E+03	2.45E+03	3.05E+03	5.98E+03	5.38E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 06 164			0.9108	2.67E+02	1.15E+02	6.99E+02	9.83E+02	1.56E+03	1.90E+03	2.89E+03	6.46E-
TOTAL INGESTION PATHWAYS DOSE 05 183			0.9473	2.23E+01	1.23E+01	5.27E+01	8.37E+01	1.82E+02	2.35E+02	7.01E+02	4.92E-
LONG-TERM GROUNDSHINE DOSE 06 164			0.9108	2.62E+02	1.13E+02	6.80E+02	9.63E+02	1.54E+03	1.87E+03	2.87E+03	6.46E-
LONG-TERM RESUSPENSION DOSE 05 379			0.9108	5.23E+00	2.06E+00	1.37E+01	1.92E+01	3.26E+01	3.53E+01	5.33E+01	3.81E-
WATER INGESTION DOSE 05 183			0.9202	1.65E+01	5.94E+00	4.19E+01	7.51E+01	1.74E+02	2.27E+02	6.84E+02	4.92E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 367			0.7502	8.19E+01	1.73E+01	2.22E+02	3.48E+02	8.39E+02	1.10E+03	3.27E+03	1.24E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 163			0.7803	3.57E+00	2.52E+00	8.55E+00	1.15E+01	1.97E+01	2.26E+01	3.85E+01	1.28E-
INGESTION OF GRAINS 06 364			0.9473	1.58E-01	1.27E-01	3.35E-01	4.07E-01	6.02E-01	6.99E-01	1.43E+00	9.51E-
INGESTION OF LEAF VEG 05 184			0.9473	8.65E-01	7.89E-01	1.78E+00	2.22E+00	3.21E+00	3.61E+00	6.90E+00	1.43E-
INGESTION OF ROOT CROPS 05 184			0.9473	4.42E-01	3.82E-01	9.41E-01	1.13E+00	1.62E+00	1.89E+00	3.60E+00	1.43E-
INGESTION OF FRUITS 06 203			0.9473	1.20E+00	1.06E+00	2.49E+00	3.06E+00	4.26E+00	4.92E+00	1.08E+01	5.90E-
INGESTION OF LEGUMES 05 184			0.9473	1.00E+00	9.81E-01	2.16E+00	2.57E+00	3.64E+00	4.15E+00	8.28E+00	1.43E-
INGESTION OF BEEF 05 278			0.9473	9.48E-01	7.56E-01	2.13E+00	2.92E+00	4.55E+00	5.15E+00	9.63E+00	2.06E-
INGESTION OF MILK 04 288			0.9473	7.99E-01	6.07E-01	1.77E+00	2.45E+00	4.86E+00	5.69E+00	9.85E+00	1.90E-



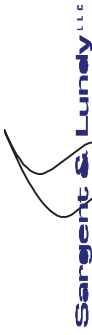
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No.	2009-11222		
Rev.	2	Date	
Page		1.4-436 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

INGESTION OF POULTRY 04 167	0.9473	2.80E-01	2.22E-01	5.75E-01	7.38E-01	1.74E+00	2.43E+00	4.65E+00	6.56E-
INGESTION OF OTHER MEAT CROPS 04 167	0.9473	5.05E-02	3.75E-02	1.01E-01	1.54E-01	3.03E-01	3.91E-01	6.53E-01	6.56E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 250	1.0000	2.56E+04	1.18E+04	7.08E+04	9.56E+04	1.28E+05	1.44E+05	2.24E+05	1.19E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 250	1.0000	2.32E+04	1.05E+04	6.35E+04	8.80E+04	1.17E+05	1.26E+05	1.95E+05	1.19E-
TOTAL INGESTION PATHWAYS DOSE 05 250	1.0000	2.54E+02	2.11E+02	4.83E+02	6.13E+02	9.13E+02	1.03E+03	1.62E+03	8.37E-
LONG-TERM GROUNDSHINE DOSE 04 250	1.0000	2.24E+04	1.02E+04	6.20E+04	8.52E+04	1.15E+05	1.24E+05	1.90E+05	1.19E-
LONG-TERM RESUSPENSION DOSE 05 326	1.0000	7.30E+02	3.24E+02	2.02E+03	2.94E+03	3.70E+03	4.06E+03	6.44E+03	1.90E-
WATER INGESTION DOSE 05 250	1.0000	1.14E+02	5.71E+01	2.95E+02	4.43E+02	7.75E+02	9.26E+02	1.40E+03	8.37E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev. 2	Date
Page 1.4-438 of 1.4-801	

Client PSEG Nuclear Development	X	Non-Safety Related	Prepared by	Date
Project PSEG ESPA			Reviewed by	Date
Proj. No 12380-001		Equip. No.	Approved by	Date

POP. -DEPENDENT DECONTAMINATION COST 04 59	0.8719	5.09E+09	1.76E+09	1.37E+10	2.17E+10	3.54E+10	4.07E+10	6.85E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	0.8822	6.48E+07	5.25E+07	1.22E+08	1.46E+08	2.14E+08	2.38E+08	4.46E+08	3.42E-
POP. -DEPENDENT INTERDICTION COST 04 59	0.8719	1.27E+10	4.90E+09	3.74E+10	5.27E+10	7.65E+10	8.72E+10	1.46E+11	4.85E-
FARM-DEPENDENT INTERDICTION COST 04 59	0.9415	1.63E+08	1.20E+08	3.39E+08	4.21E+08	5.46E+08	5.79E+08	7.63E+08	3.42E-
POP. -DEPENDENT CONDEMNATION COST 04 1	0.0408	1.25E+06	0.00E+00	0.00E+00	0.00E+00	5.19E+07	7.90E+07	2.08E+08	6.99E-
FARM-DEPENDENT CONDEMNATION COST 05 75	0.2669	1.32E+05	0.00E+00	3.04E+05	5.50E+05	3.16E+06	4.03E+06	1.02E+07	3.25E-
EMERGENCY PHASE COST 04 59	0.8381	1.47E+08	5.40E+07	4.43E+08	6.37E+08	8.86E+08	9.96E+08	1.43E+09	4.85E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
MILK DISPOSAL COST 04 326	0.9329	4.26E+06	1.58E+06	1.21E+07	1.81E+07	2.23E+07	2.35E+07	2.86E+07	3.81E-
CROP DISPOSAL COST 04 326	0.9415	1.56E+08	1.27E+08	2.80E+08	3.19E+08	3.93E+08	4.29E+08	5.32E+08	3.81E-
AFFECTED AREA/POPULATION 0-80.5 km									
FARM DECONTAMINATION (HECTARES) 04 59	0.8822	3.41E+04	2.75E+04	7.18E+04	8.09E+04	1.07E+05	1.22E+05	2.06E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	0.8719	4.38E+05	1.80E+05	1.31E+06	2.00E+06	2.56E+06	2.85E+06	5.02E+06	4.85E-
FARM INTERDICTION (HECTARES) 04 326	0.9415	6.63E+04	5.58E+04	1.28E+05	1.59E+05	2.07E+05	2.12E+05	2.43E+05	1.52E-
POP. INTERDICTION (INDIVIDUALS) 04 59	0.8719	4.38E+05	1.80E+05	1.31E+06	2.00E+06	2.56E+06	2.85E+06	5.02E+06	4.85E-
FARM CONDEMNATION (HECTARES) 05 75	0.2669	8.82E+00	0.00E+00	2.19E+01	3.42E+01	2.12E+02	2.60E+02	7.49E+02	3.25E-
POP. CONDEMNATION (INDIVIDUALS) 04 1	0.0408	4.21E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+02	2.40E+02	6.63E+02	6.99E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-440 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

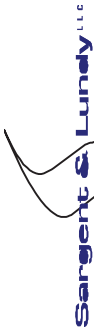
MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 18

SOURCE TERM 3 OF 23:
RC202

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	1.00E-09	1.00E-07	1.00E-08
2.00E-08	1.00E+00	2.00E-07	2.00E-08
3.00E-08	1.00E+00	3.00E-07	3.00E-08
5.00E-08	1.00E+00	5.00E-07	5.00E-08
7.00E-08	1.00E+00	7.00E-07	7.00E-08
1.00E-07	1.00E+00	1.00E-06	1.00E-07
2.00E-07	1.00E+00	2.00E-06	2.00E-07
3.00E-07	1.00E+00	3.00E-06	3.00E-07
5.00E-07	1.00E+00	5.00E-06	5.00E-07
7.00E-07	1.00E+00	7.00E-06	7.00E-07
1.00E-06	1.00E+00	1.00E-05	1.00E-06
2.00E-06	1.00E+00	2.00E-05	2.00E-06
3.00E-06	1.00E+00	3.00E-05	3.00E-06
5.00E-06	1.00E+00	5.00E-05	5.00E-06
7.00E-06	1.00E+00	7.00E-05	7.00E-06
1.00E-05	1.00E+00	1.00E-04	1.00E-05
2.00E-05	1.00E+00	2.00E-04	2.00E-05
3.00E-05	1.00E+00	3.00E-04	3.00E-05
5.00E-05	1.00E+00	5.00E-04	5.00E-05
7.00E-05	1.00E+00	7.00E-04	7.00E-05
1.00E-04	1.00E+00	1.00E-03	1.00E-04
2.00E-04	9.49E-01	2.00E-03	2.00E-04

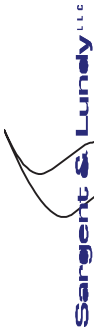


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-449 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related										
L-EDEWBODY 05 224	TOT LIF	0-16.1 km	0.4681	7.65E-01	0.00E+00	1.63E+00	4.05E+00	1.43E+01	2.13E+01	1.90E+02	2.04E-
L-EDEWBODY 06 210	TOT LIF	0-80.5 km	1.0000	1.30E+04	4.65E+03	3.80E+04	5.44E+04	8.10E+04	9.19E+04	1.26E+05	9.51E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	04 249	0-80.5 km	1.0000	1.06E-04	3.35E-05	3.12E-04	4.50E-04	7.89E-04	9.04E-04	1.35E-03	1.52E-
CAN FAT/TOTAL	05 224	0-16.1 km	0.4681	7.62E-07	0.00E+00	1.56E-06	3.83E-06	1.39E-05	2.37E-05	1.95E-04	2.04E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 03 252		0-1.6 km	0.8459	4.38E-02	3.54E-03	9.34E-02	2.05E-01	3.96E-01	4.62E-01	8.76E-01	3.17E-



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			Rev. 2	Date
Safety Related	X	Non-Safety Related	Page 1.4-451 of 1.4-801	
Client	PSEG Nuclear Development			
Project	PSEG ESPA			
Proj. No	12380-001	Equip. No.		

L-EDEWBODY 05 227	TOT LIF	0-16.1 km	1.0000	3.82E+02	1.02E+02	1.06E+02	1.50E+03	3.47E+03	4.74E+03	1.16E+04	6.66E-
L-EDEWBODY 06 210	TOT LIF	0-80.5 km	1.0000	1.34E+04	5.01E+03	3.88E+04	5.53E+04	8.21E+04	9.31E+04	1.30E+05	9.51E-
POPULATION WEIGHTED RISK											
05 337	ERL FAT/TOTAL	0-80.5 km	0.0005	7.57E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-08	1.24E-
0.00E+00	ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
05 337	ERL FAT/TOTAL	3.2-4.8 km	0.0005	5.26E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.78E-04	1.24E-
04 249	CAN FAT/TOTAL	0-80.5 km	1.0000	1.10E-04	3.66E-05	3.20E-04	4.57E-04	7.95E-04	9.11E-04	1.35E-03	1.52E-
05 227	CAN FAT/TOTAL	0-16.1 km	1.0000	5.21E-04	1.09E-04	1.43E-03	2.22E-03	4.82E-03	7.21E-03	1.94E-02	6.66E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
04 337	L-EDEWBODY	0-1.6 km	1.0000	1.65E+00	8.19E-01	4.93E+00	6.71E+00	1.47E+01	1.83E+01	2.91E+01	2.47E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-452 of 1.4-801		

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

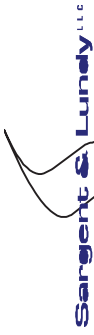
SOURCE TERM 4 OF 23:
RC203

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 19:24:48	PAGE 22	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.55E+03	7.06E+02	4.11E+03	5.48E+03	7.95E+03	8.92E+03	1.28E+04	1.41E-	
05 40											
CAN FAT/TOTAL	0-16.1 km	0.9441	2.22E+01	1.03E+01	5.73E+01	7.78E+01	1.44E+02	1.83E+02	3.14E+02	1.45E-	
05 352											
POPULATION DOSE (SV)											
L-EDEWBODY TOT LIF	0-16.1 km	0.9441	5.01E+02	2.33E+02	1.25E+03	1.75E+03	3.35E+03	4.05E+03	7.17E+03	1.45E-	
05 352											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	3.49E+04	1.61E+04	9.73E+04	1.18E+05	1.76E+05	2.02E+05	2.91E+05	1.41E-	
05 40											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.63E-04	7.33E-05	4.41E-04	6.01E-04	8.35E-04	9.23E-04	1.27E-03	1.41E-	
05 40											
CAN FAT/TOTAL	0-16.1 km	0.9062	2.27E-04	1.02E-04	5.99E-04	8.25E-04	1.27E-03	1.46E-03	2.23E-03	1.45E-	
05 352											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



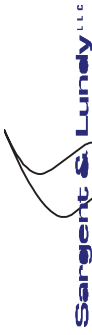
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.4-454 of 1.4-801		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 04 181	0.9431	2.95E-01	2.15E-01	6.55E-01	9.56E-01	1.46E+00	1.73E+00	3.91E+00	1.05E-
INGESTION OF OTHER MEAT CROPS 04 258	0.9431	5.65E-02	3.30E-02	1.15E-01	1.83E-01	5.64E-01	6.67E-01	9.42E-01	1.14E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 40	1.0000	3.49E+04	1.61E+04	9.73E+04	1.18E+05	1.76E+05	2.02E+05	2.91E+05	1.41E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 40	1.0000	2.98E+04	1.34E+04	8.11E+04	1.04E+05	1.39E+05	1.58E+05	2.33E+05	1.41E-
TOTAL INGESTION PATHWAYS DOSE 05 250	1.0000	3.59E+02	2.79E+02	7.03E+02	9.89E+02	1.49E+03	1.77E+03	2.83E+03	8.37E-
LONG-TERM GROUNDSHINE DOSE 05 40	1.0000	2.89E+04	1.30E+04	7.86E+04	1.02E+05	1.32E+05	1.47E+05	2.26E+05	1.41E-
LONG-TERM RESUSPENSION DOSE 04 156	1.0000	9.65E+02	4.02E+02	2.65E+03	3.61E+03	5.24E+03	5.46E+03	6.84E+03	1.19E-
WATER INGESTION DOSE 05 250	1.0000	2.09E+02	1.02E+02	5.33E+02	8.05E+02	1.29E+03	1.49E+03	2.62E+03	8.37E-



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related	Rev. 2	Date
			Page 1.4-456 of 1.4-801	
Client	PSEG Nuclear Development			
Project	PSEG ESPA			
Proj. No	12380-001	Equip. No.		

POP.-DEPENDENT DECONTAMINATION COST 04 59	0.8848	6.65E+09	2.73E+09	2.06E+10	2.84E+10	3.89E+10	4.38E+10	6.96E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	0.8951	8.36E+07	6.83E+07	1.56E+08	2.01E+08	2.58E+08	2.87E+08	4.55E+08	3.42E-
POP.-DEPENDENT INTERDICTION COST 05 236	0.8848	1.86E+10	7.92E+09	5.57E+10	7.23E+10	1.03E+11	1.21E+11	2.18E+11	1.46E-
FARM-DEPENDENT INTERDICTION COST 04 326	0.9728	1.90E+08	1.45E+08	3.73E+08	4.74E+08	5.97E+08	6.50E+08	7.75E+08	1.52E-
POP.-DEPENDENT CONDEMNATION COST 05 74	0.0841	2.18E+07	0.00E+00	0.00E+00	1.04E+07	6.58E+08	1.21E+09	6.24E+09	6.30E-
FARM-DEPENDENT CONDEMNATION COST 05 75	0.4384	4.45E+05	0.00E+00	4.60E+05	1.89E+06	8.51E+06	2.15E+07	3.63E+07	3.88E-
EMERGENCY PHASE COST 04 59	0.9106	2.98E+08	1.29E+08	9.02E+08	1.07E+09	1.30E+09	1.42E+09	1.88E+09	4.85E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
MILK DISPOSAL COST 04 326	0.9607	4.71E+06	1.85E+06	1.30E+07	2.00E+07	2.27E+07	2.40E+07	2.93E+07	3.81E-
CROP DISPOSAL COST 04 329	0.9728	1.72E+08	1.43E+08	3.01E+08	3.32E+08	4.19E+08	4.63E+08	5.50E+08	1.43E-
AFFECTED AREA/POPULATION				0-80.5 km					
FARM DECONTAMINATION (HECTARES) 04 59	0.8951	4.30E+04	3.60E+04	8.27E+04	9.95E+04	1.35E+05	1.54E+05	2.15E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	0.8848	5.46E+05	2.46E+05	1.51E+06	2.12E+06	3.11E+06	3.58E+06	5.21E+06	4.85E-
FARM INTERDICTION (HECTARES) 04 329	0.9728	7.27E+04	6.19E+04	1.35E+05	1.68E+05	2.11E+05	2.19E+05	2.50E+05	3.52E-
POP. INTERDICTION (INDIVIDUALS) 04 59	0.8848	5.46E+05	2.46E+05	1.51E+06	2.12E+06	3.11E+06	3.58E+06	5.21E+06	4.85E-
FARM CONDEMNATION (HECTARES) 05 75	0.4384	2.79E+01	0.00E+00	2.85E+01	1.24E+02	6.05E+02	1.16E+03	2.66E+03	3.88E-
POP. CONDEMNATION (INDIVIDUALS) 05 74	0.0841	7.40E+01	0.00E+00	0.00E+00	5.09E+01	2.32E+03	4.90E+03	1.99E+04	6.30E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.4-459 of 1.4-801		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	Safety Related	Non-Safety Related
	X	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

3.00E-03	8.35E-01	3.00E-05	8.26E-01	3.00E-02	8.53E-01	3.00E-03	6.68E-01
5.00E-03	8.24E-01	5.00E-05	8.20E-01	5.00E-02	8.29E-01	5.00E-03	6.58E-01
7.00E-03	8.01E-01	7.00E-05	8.05E-01	7.00E-02	7.88E-01	7.00E-03	6.55E-01
1.00E-02	7.91E-01	1.00E-04	7.95E-01	1.00E-01	7.33E-01	1.00E-02	6.55E-01
2.00E-02	7.82E-01	2.00E-04	7.76E-01	2.00E-01	7.06E-01	2.00E-02	6.41E-01
3.00E-02	7.65E-01	3.00E-04	7.41E-01	3.00E-01	7.06E-01	3.00E-02	6.36E-01
5.00E-02	7.00E-01	5.00E-04	7.09E-01	5.00E-01	6.81E-01	5.00E-02	5.86E-01
7.00E-02	6.79E-01	7.00E-04	6.95E-01	7.00E-01	5.74E-01	7.00E-02	4.40E-01
1.00E-01	6.12E-01	1.00E-03	6.49E-01	1.00E+00	4.20E-01	1.00E-01	2.16E-01
2.00E-01	3.29E-01	2.00E-03	5.57E-01	2.00E+00	1.61E-01	1.22E-01	2.57E-04
3.00E-01	1.09E-01	3.00E-03	5.11E-01	3.00E+00	1.46E-01	N.D.	N.D.
5.00E-01	7.66E-02	5.00E-03	4.78E-01	5.00E+00	9.89E-02	N.D.	N.D.
7.00E-01	3.93E-02	7.00E-03	4.69E-01	7.00E+00	4.54E-02	N.D.	N.D.
1.00E+00	7.80E-03	1.00E-02	4.51E-01	1.00E+01	3.42E-02	N.D.	N.D.
1.85E+00	3.61E-04	2.00E-02	3.94E-01	2.00E+01	3.78E-03	N.D.	N.D.
N.D.	N.D.	3.00E-02	3.35E-01	2.91E+01	2.47E-04	N.D.	N.D.
N.D.	N.D.	5.00E-02	3.18E-01	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	7.00E-02	2.50E-01	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	1.00E-01	8.04E-02	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	2.00E-01	5.12E-02	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	3.00E-01	3.42E-02	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	5.00E-01	3.53E-03	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	7.00E-01	3.17E-03	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	8.76E-01	3.17E-03	N.D.	N.D.	N.D.	N.D.



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 5 OF 23:
 RC204

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

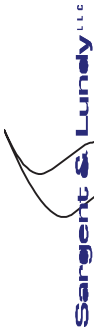
COHORT 1 = 95% EVACUATION

10-JAN-10 19:24:48	PAGE 26	PROB	QUANTILES					PEAK	PEAK
PEAK	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES									
CAN FAT/TOTAL	0-80.5 km	1.0000	4.50E+02	1.43E+02	1.86E+03	3.15E+03	3.50E+03	5.33E+03	1.52E-
04 249	0-16.1 km	0.4682	2.55E-02	0.00E+00	5.46E-02	1.41E-01	4.43E-01	7.73E-01	1.56E-
05 225	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL									
0.00E+00									

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00									
EARLY dose L-EDEWBODY > 0.250 Sv	0.0191	2.35E+02	0.00E+00	0.00E+00	0.00E+00	3.38E+03	1.61E+04	8.61E+04	5.71E-
05 345									

POPULATION DOSE (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-467 of 1.4-801

Client PSEG Nuclear Development	X	Non-Safety Related	
Project PSEG ESPA			
Proj. No 12380-001			
	Prepared by		Date
	Reviewed by		Date
	Approved by		Date

L-EDEWBODY 05 225	TOT LIF	0-16.1 km	0.4682	4.15E-01	0.00E+00	9.26E-01	2.24E+00	7.12E+00	1.08E+01	9.18E+01	3.61E-
L-EDEWBODY 04 249	TOT LIF	0-80.5 km	1.0000	6.73E+03	2.46E+03	1.99E+04	2.75E+04	3.97E+04	4.54E+04	6.57E+04	2.00E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0	0-80.5 km	1.0000	5.53E-05	1.82E-05	1.55E-04	2.29E-04	3.67E-04	4.24E-04	6.54E-04	1.52E-
CAN FAT/TOTAL	0	0-16.1 km	0.4682	4.19E-07	0.00E+00	9.26E-07	2.24E-06	7.18E-06	1.18E-05	9.08E-05	3.61E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 03 252		0-1.6 km	0.8459	2.39E-02	1.82E-03	4.60E-02	1.13E-01	2.27E-01	2.73E-01	5.00E-01	3.17E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.4-469 of 1.4-801	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

L-EDEWBODY 05 227	TOT LIF	0-16.1 km	1.0000	1.73E+02	4.39E+01	5.06E+02	7.14E+02	1.53E+03	2.13E+03	5.73E+03	6.66E-
L-EDEWBODY 06 210	TOT LIF	0-80.5 km	1.0000	6.90E+03	2.60E+03	2.03E+04	2.82E+04	4.08E+04	4.71E+04	6.72E+04	9.51E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	04 249	0-80.5 km	1.0000	5.71E-05	1.99E-05	1.59E-04	2.32E-04	3.80E-04	4.48E-04	6.55E-04	1.52E-
CAN FAT/TOTAL	05 227	0-16.1 km	1.0000	2.37E-04	4.87E-05	6.85E-04	9.81E-04	2.32E-03	3.16E-03	9.85E-03	6.66E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY	04 337	0-1.6 km	1.0000	7.74E-01	3.48E-01	2.09E+00	2.87E+00	7.62E+00	9.25E+00	1.38E+01	2.47E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-470 of 1.4-801		

Client PSEG Nuclear Development	X	Non-Safety Related	
Project PSEG ESPA			
Proj. No 12380-001			
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

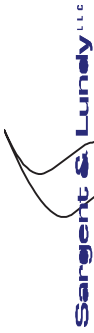
SOURCE TERM 5 OF 23:
 RC204

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 19:24:48	PAGE 28	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.14E+03	5.27E+02	3.11E+03	4.06E+03	6.00E+03	6.76E+03	1.09E+04	1.09E+04	1.19E-
04 250											
CAN FAT/TOTAL	0-16.1 km	0.9439	1.63E+01	7.42E+00	4.12E+01	5.89E+01	1.09E+02	1.31E+02	2.80E+02	2.80E+02	6.46E-
06 164											
POPULATION DOSE (SV)											
L-EDEWBODY TOT LIF	0-16.1 km	0.9439	3.67E+02	1.72E+02	9.27E+02	1.30E+03	2.47E+03	3.01E+03	6.40E+03	6.40E+03	6.46E-
06 164											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	2.56E+04	1.19E+04	7.05E+04	9.11E+04	1.26E+05	1.42E+05	2.47E+05	2.47E+05	1.19E-
04 250											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.25E-04	5.65E-05	3.33E-04	4.63E-04	6.93E-04	7.64E-04	1.15E-03	1.15E-03	1.19E-
04 250											
CAN FAT/TOTAL	0-16.1 km	0.9101	1.84E-04	8.35E-05	4.74E-04	6.73E-04	1.12E-03	1.24E-03	2.12E-03	2.12E-03	6.46E-
06 164											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page		1.4-472 of 1.4-801

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 04 168	0.9439	2.73E-01	2.14E-01	5.67E-01	7.36E-01	1.81E+00	2.45E+00	4.54E+00	2.09E-
INGESTION OF OTHER MEAT CROPS 06 204	0.9439	4.85E-02	3.39E-02	9.97E-02	1.64E-01	3.46E-01	4.10E-01	1.15E+00	4.94E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 250	1.0000	2.56E+04	1.19E+04	7.05E+04	9.11E+04	1.26E+05	1.42E+05	2.47E+05	1.19E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 250	1.0000	2.28E+04	1.04E+04	6.21E+04	8.31E+04	1.15E+05	1.25E+05	2.10E+05	1.19E-
TOTAL INGESTION PATHWAYS DOSE 05 250	1.0000	2.56E+02	2.12E+02	4.86E+02	6.25E+02	9.74E+02	1.07E+03	1.76E+03	8.37E-
LONG-TERM GROUNDSHINE DOSE 04 250	1.0000	2.20E+04	9.93E+03	6.04E+04	8.17E+04	1.14E+05	1.25E+05	2.03E+05	1.19E-
LONG-TERM RESUSPENSION DOSE 05 326	1.0000	8.15E+02	3.56E+02	2.23E+03	3.10E+03	4.64E+03	5.11E+03	7.13E+03	1.90E-
WATER INGESTION DOSE 05 250	1.0000	1.18E+02	5.77E+01	3.02E+02	4.58E+02	8.25E+02	9.59E+02	1.58E+03	8.37E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

MILK DISPOSAL AREA (HECTARES)	0.9387	6.03E+04	5.09E+04	1.22E+05	1.52E+05	2.06E+05	2.12E+05	2.43E+05	1.52E-			
04 326												
CROP DISPOSAL AREA (HECTARES)	0.9537	6.61E+04	5.55E+04	1.28E+05	1.59E+05	2.07E+05	2.13E+05	2.43E+05	1.52E-			
04 326												

Rev.	2	Date	
Page	1.4-475 of 1.4-801		

Prepared by		Date	
Reviewed by		Date	
Approved by		Date	



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-476 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 30

SOURCE TERM 5 OF 23:
RC204

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	PROB>=X	X	PROB>=X
1.00E-08	1.00E+00	1.00E-07	1.00E-08
2.00E-08	1.00E+00	2.00E-07	2.00E-08
3.00E-08	1.00E+00	3.00E-07	3.00E-08
5.00E-08	1.00E+00	5.00E-07	5.00E-08
7.00E-08	1.00E+00	7.00E-07	7.00E-08
1.00E-07	1.00E+00	1.00E-06	1.00E-07
2.00E-07	1.00E+00	2.00E-06	2.00E-07
3.00E-07	1.00E+00	3.00E-06	3.00E-07
5.00E-07	1.00E+00	5.00E-06	5.00E-07
7.00E-07	1.00E+00	7.00E-06	7.00E-07
1.00E-06	1.00E+00	1.00E-05	1.00E-06
2.00E-06	1.00E+00	2.00E-05	2.00E-06
3.00E-06	1.00E+00	3.00E-05	3.00E-06
5.00E-06	1.00E+00	5.00E-05	5.00E-06
7.00E-06	1.00E+00	7.00E-05	7.00E-06
1.00E-05	1.00E+00	1.00E-04	1.00E-05
2.00E-05	1.00E+00	2.00E-04	2.00E-05
3.00E-05	1.00E+00	3.00E-04	3.00E-05
5.00E-05	1.00E+00	5.00E-04	5.00E-05
7.00E-05	1.00E+00	7.00E-04	7.00E-05
1.00E-04	1.00E+00	1.00E-03	1.00E-04
2.00E-04	9.97E-01	2.00E-03	2.00E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-483 of 1.4-801

Client PSEG Nuclear Development	X	Non-Safety Related	Prepared by	Date
Project PSEG ESPA			Reviewed by	Date
Proj. No 12380-001		Equip. No.	Approved by	Date

ERL FAT/TOTAL 0.00E+00 0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00 0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
POPULATION EXCEEDING DOSE													
EARLY dose L-EDEWBODY > 2.00 Sv 05 252		0.0043	9.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EARLY dose L-EDEWBODY > 0.250 Sv 05 210		0.5249	5.48E+03	1.41E-01	1.19E+04	2.93E+04	1.07E+05	1.21E+05	2.20E+05	2.20E+05	2.20E+05	2.20E+05	3.81E-
POPULATION DOSE (Sv)													
L-EDEWBODY TOT LIF 04 266	0-16.1 km	1.0000	5.31E+02	2.53E+02	1.31E+03	1.83E+03	3.46E+03	4.29E+03	7.12E+03	7.12E+03	7.12E+03	7.12E+03	1.95E-
L-EDEWBODY TOT LIF 06 210	0-80.5 km	1.0000	5.71E+04	2.52E+04	1.50E+05	2.09E+05	2.90E+05	3.11E+05	4.70E+05	4.70E+05	4.70E+05	4.70E+05	9.51E-
POPULATION WEIGHTED RISK													
ERL FAT/TOTAL 0.00E+00 0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00 0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00 0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00 0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 06 210	0-80.5 km	1.0000	3.26E-04	1.36E-04	9.25E-04	1.13E-03	1.62E-03	1.89E-03	3.06E-03	3.06E-03	3.06E-03	3.06E-03	9.51E-
CAN FAT/TOTAL 04 171	0-16.1 km	1.0000	2.52E-04	1.07E-04	6.91E-04	9.14E-04	1.53E-03	1.89E-03	2.56E-03	2.56E-03	2.56E-03	2.56E-03	4.38E-
PEAK DOSE FOUND ON SPATIAL GRID (Sv)													
L-EDEWBODY 03 252	0-1.6 km	1.0000	1.84E-01	1.25E-01	2.92E-01	5.81E-01	1.39E+00	1.77E+00	2.96E+00	2.96E+00	2.96E+00	2.96E+00	3.17E-

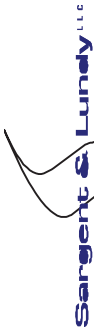


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-485 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 05 225	TOT LIF 0-16.1 km	0.4682	1.13E+00	0.00E+00	2.38E+00	5.73E+00	2.01E+01	3.26E+01	2.38E+02	1.56E-
L-EDEWBODY 04 249	TOT LIF 0-80.5 km	1.0000	1.85E+04	5.90E+03	5.60E+04	7.98E+04	1.16E+05	1.28E+05	2.06E+05	2.00E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 249	0-80.5 km	1.0000	1.53E-04	4.20E-05	4.47E-04	6.84E-04	1.10E-03	1.21E-03	1.94E-03	2.00E-
CAN FAT/TOTAL 05 224	0-16.1 km	0.4682	1.04E-06	0.00E+00	2.10E-06	4.72E-06	1.94E-05	3.37E-05	2.07E-04	2.04E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 03 252	0-1.6 km	0.8459	5.69E-02	3.18E-03	1.48E-01	2.18E-01	5.90E-01	6.68E-01	1.53E+00	3.17E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-487 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 227	0-16.1 km	1.0000	4.38E+02	1.08E+02	1.19E+03	1.73E+03	3.77E+03	5.21E+03	1.55E+04	6.66E-
L-EDEWBODY TOT LIF 06 210	0-80.5 km	1.0000	1.89E+04	6.30E+03	5.69E+04	8.12E+04	1.17E+05	1.28E+05	2.09E+05	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 06 210	0-80.5 km	1.0000	1.57E-04	4.72E-05	4.57E-04	7.05E-04	1.06E-03	1.13E-03	1.97E-03	9.51E-
CAN FAT/TOTAL 05 227	0-16.1 km	1.0000	5.86E-04	1.04E-04	1.64E-03	2.47E-03	5.62E-03	7.55E-03	2.47E-02	6.66E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 301	0-1.6 km	1.0000	1.58E+00	7.00E-01	3.53E+00	6.55E+00	1.45E+01	1.82E+01	3.56E+01	3.61E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-488	of	1.4-801

Client PSEG Nuclear Development	X	Non-Safety Related	
Project PSEG ESPA			
Proj. No 12380-001		Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

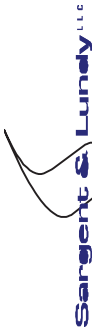
SOURCE TERM 6 OF 23:
 RC205

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 19:24:48	PAGE 34	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.69E+03	7.77E+02	4.79E+03	6.06E+03	8.64E+03	9.82E+03	1.34E+04	1.19E-	
04 250											
CAN FAT/TOTAL	0-16.1 km	0.9438	2.25E+01	1.06E+01	5.75E+01	7.81E+01	1.42E+02	1.80E+02	3.07E+02	1.95E-	
04 266											
POPULATION DOSE (SV)											
L-EDEWBODY TOT LIF	0-16.1 km	0.9438	5.08E+02	2.38E+02	1.26E+03	1.75E+03	3.28E+03	3.92E+03	7.04E+03	1.95E-	
04 266											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	3.86E+04	1.78E+04	1.07E+05	1.30E+05	2.01E+05	2.15E+05	3.08E+05	1.19E-	
04 250											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.73E-04	7.80E-05	5.04E-04	6.31E-04	8.84E-04	1.00E-03	1.31E-03	1.19E-	
04 308											
CAN FAT/TOTAL	0-16.1 km	0.8954	2.21E-04	9.92E-05	5.80E-04	7.85E-04	1.25E-03	1.44E-03	2.20E-03	1.95E-	
04 266											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.4-489 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 155	0-1.6 km	0.7641	5.06E-02	5.66E-02	1.01E-01	1.04E-01	1.10E-01	1.13E-01	1.23E-01	4.57E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 266	0-16.1 km	0.9438	5.08E+02	2.38E+02	1.26E+03	1.75E+03	3.28E+03	3.92E+03	7.04E+03	1.95E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 266		0.8954	3.09E+02	1.29E+02	8.14E+02	1.09E+03	1.97E+03	2.18E+03	3.08E+03	1.95E-
TOTAL INGESTION PATHWAYS DOSE 05 183		0.9436	4.92E+01	3.07E+01	1.18E+02	2.00E+02	3.80E+02	5.27E+02	1.80E+03	4.92E-
LONG-TERM GROUNDSHINE DOSE 04 266		0.8954	2.98E+02	1.24E+02	7.91E+02	1.05E+03	1.83E+03	2.11E+03	3.05E+03	1.95E-
LONG-TERM RESUSPENSION DOSE 04 294		0.8954	1.05E+01	3.48E+00	2.82E+01	4.07E+01	6.44E+01	7.18E+01	9.99E+01	1.21E-
WATER INGESTION DOSE 05 368		0.9124	3.64E+01	1.17E+01	9.65E+01	1.62E+02	3.62E+02	4.97E+02	1.78E+03	1.28E-
POP.-DEPENDENT DECONTAMINATION DOSE 04 266		0.7394	1.45E+02	3.43E+01	3.93E+02	6.03E+02	1.34E+03	1.90E+03	3.81E+03	1.95E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 201		0.7561	5.64E+00	4.67E+00	1.25E+01	1.55E+01	2.33E+01	2.67E+01	4.93E+01	1.33E-
INGESTION OF GRAINS 06 203		0.9408	3.42E-01	3.29E-01	7.20E-01	8.15E-01	1.07E+00	1.17E+00	2.76E+00	5.90E-
INGESTION OF LEAF VEG 06 203		0.9408	2.92E+00	3.03E+00	5.99E+00	7.10E+00	9.25E+00	1.03E+01	2.36E+01	5.90E-
INGESTION OF ROOT CROPS 06 203		0.9408	1.80E+00	1.78E+00	3.55E+00	4.13E+00	5.65E+00	6.35E+00	1.45E+01	5.90E-
INGESTION OF FRUITS 06 203		0.9408	1.49E+00	1.26E+00	3.14E+00	3.63E+00	5.04E+00	5.42E+00	1.28E+01	4.94E-
INGESTION OF LEGUMES 06 203		0.9408	3.51E+00	3.29E+00	7.38E+00	8.37E+00	1.09E+01	1.20E+01	2.85E+01	5.90E-
INGESTION OF BEEF 04 268		0.9408	1.00E+00	6.99E-01	2.35E+00	3.44E+00	6.04E+00	7.13E+00	9.31E+00	7.04E-
INGESTION OF MILK 04 260		0.9408	1.38E+00	1.16E+00	2.97E+00	3.69E+00	5.88E+00	7.03E+00	9.89E+00	7.04E-



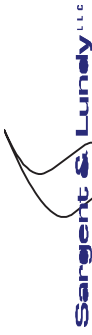
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No.	2009-11222	
Rev.	2	Date
Page	1.4-490 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

INGESTION OF POULTRY 06 140	0.9408	2.33E-01	1.99E-01	4.68E-01	6.42E-01	1.20E+00	1.40E+00	3.05E+00	9.51E-
INGESTION OF OTHER MEAT CROPS 04 268	0.9408	9.44E-02	8.82E-02	1.95E-01	2.37E-01	4.11E-01	5.18E-01	6.95E-01	7.04E-
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km									
TOTAL LONG-TERM PATHWAYS DOSE 04 250	1.0000	3.86E+04	1.78E+04	1.07E+05	1.30E+05	2.01E+05	2.15E+05	3.08E+05	1.19E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 308	1.0000	3.22E+04	1.41E+04	9.14E+04	1.11E+05	1.52E+05	1.74E+05	2.43E+05	1.19E-
TOTAL INGESTION PATHWAYS DOSE 05 250	1.0000	5.41E+02	4.26E+02	1.07E+03	1.38E+03	2.19E+03	2.44E+03	4.09E+03	8.37E-
LONG-TERM GROUNDSHINE DOSE 04 308	1.0000	3.03E+04	1.34E+04	8.53E+04	1.07E+05	1.41E+05	1.59E+05	2.29E+05	1.19E-
LONG-TERM RESUSPENSION DOSE 04 308	1.0000	1.91E+03	8.06E+02	5.53E+03	7.39E+03	1.02E+04	1.07E+04	1.39E+04	1.19E-
WATER INGESTION DOSE 05 250	1.0000	2.87E+02	1.46E+02	7.26E+02	1.06E+03	2.00E+03	2.16E+03	3.81E+03	8.37E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No.	2009-11222		
Rev.	2	Date	
Page 1.4-492 of 1.4-801			

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

POP. -DEPENDENT DECONTAMINATION COST 04 59	0.8987	7.28E+09	3.05E+09	2.23E+10	3.04E+10	4.10E+10	4.67E+10	8.05E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	0.8987	9.11E+07	7.51E+07	1.78E+08	2.15E+08	2.86E+08	3.21E+08	5.22E+08	3.42E-
POP. -DEPENDENT INTERDICTION COST 05 236	0.8987	2.22E+10	9.76E+09	6.38E+10	8.08E+10	1.25E+11	1.50E+11	3.18E+11	1.46E-
FARM-DEPENDENT INTERDICTION COST 04 326	0.9849	1.98E+08	1.53E+08	3.92E+08	5.04E+08	6.44E+08	7.04E+08	7.96E+08	1.52E-
POP. -DEPENDENT CONDEMNATION COST 05 80	0.1032	4.32E+07	0.00E+00	5.38E+05	5.31E+07	1.23E+09	1.69E+09	6.31E+09	2.04E-
FARM-DEPENDENT CONDEMNATION COST 05 199	0.4586	1.50E+06	0.00E+00	2.25E+06	9.45E+06	2.79E+07	3.18E+07	1.02E+08	3.79E-
EMERGENCY PHASE COST 04 59	0.9053	2.97E+08	1.27E+08	9.05E+08	1.07E+09	1.28E+09	1.39E+09	1.82E+09	4.85E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 04 326	0.9591	4.69E+06	1.82E+06	1.29E+07	1.98E+07	2.27E+07	2.39E+07	2.93E+07	3.81E-
CROP DISPOSAL COST 04 326	0.9849	1.72E+08	1.41E+08	2.96E+08	3.26E+08	3.98E+08	4.34E+08	5.71E+08	3.14E-
AFFECTED AREA/POPULATION 0-80.5 km									
FARM DECONTAMINATION (HECTARES) 04 59	0.8987	4.72E+04	3.89E+04	9.18E+04	1.11E+05	1.61E+05	1.88E+05	2.19E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	0.8987	6.03E+05	2.93E+05	1.63E+06	2.26E+06	3.61E+06	4.32E+06	5.26E+06	4.85E-
FARM INTERDICTION (HECTARES) 05 326	0.9849	7.23E+04	6.11E+04	1.35E+05	1.68E+05	2.10E+05	2.17E+05	2.64E+05	7.61E-
POP. INTERDICTION (INDIVIDUALS) 04 59	0.8987	6.03E+05	2.93E+05	1.63E+06	2.26E+06	3.61E+06	4.32E+06	5.26E+06	4.85E-
FARM CONDEMNATION (HECTARES) 05 199	0.4586	9.01E+01	0.00E+00	1.34E+02	6.73E+02	1.78E+03	2.10E+03	6.95E+03	1.10E-
POP. CONDEMNATION (INDIVIDUALS) 05 80	0.1032	1.46E+02	0.00E+00	2.31E+00	1.44E+02	5.13E+03	6.29E+03	2.01E+04	2.04E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.4-494 of 1.4-801	
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

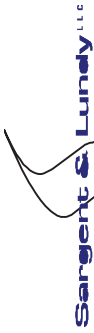
MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 36

SOURCE TERM 6 OF 23:
RC205

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km
L-EDEWBODY

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	PROB>=X	X	PROB>=X
1.00E-07	1.00E+00	1.00E-06	1.00E-07
2.00E-07	1.00E+00	2.00E-06	2.00E-07
3.00E-07	1.00E+00	3.00E-06	3.00E-07
5.00E-07	1.00E+00	5.00E-06	5.00E-07
7.00E-07	1.00E+00	7.00E-06	7.00E-07
1.00E-06	1.00E+00	1.00E-05	1.00E-06
2.00E-06	1.00E+00	2.00E-05	2.00E-06
3.00E-06	1.00E+00	3.00E-05	3.00E-06
5.00E-06	1.00E+00	5.00E-05	5.00E-06
7.00E-06	1.00E+00	7.00E-05	7.00E-06
1.00E-05	1.00E+00	1.00E-04	1.00E-05
2.00E-05	1.00E+00	2.00E-04	2.00E-05
3.00E-05	1.00E+00	3.00E-04	3.00E-05
5.00E-05	1.00E+00	5.00E-04	5.00E-05
7.00E-05	1.00E+00	7.00E-04	7.00E-05
1.00E-04	1.00E+00	1.00E-03	1.00E-04
2.00E-04	1.00E+00	2.00E-03	2.00E-04
3.00E-04	9.97E-01	3.00E-03	3.00E-04
5.00E-04	9.48E-01	5.00E-03	5.00E-04
7.00E-04	9.19E-01	7.00E-03	7.00E-04
1.00E-03	8.81E-01	1.00E-02	1.00E-03
2.00E-03	8.35E-01	2.00E-02	2.00E-03

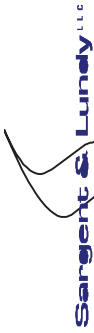


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-503 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 225	0-16.1 km	0.3548	4.62E-01	0.00E+00	1.12E+00	2.85E+00	7.57E+00	9.92E+00	4.51E+01	1.39E-
L-EDEWBODY TOT LIF 05 345	0-80.5 km	1.0000	7.55E+03	4.04E+03	2.01E+04	2.38E+04	3.16E+04	3.33E+04	4.65E+04	5.71E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 05 345	0-80.5 km	1.0000	7.47E-05	3.80E-05	2.01E-04	2.47E-04	3.47E-04	3.85E-04	6.28E-04	5.71E-
CAN FAT/TOTAL 05 225	0-16.1 km	0.3548	5.42E-07	0.00E+00	1.30E-06	3.25E-06	8.71E-06	1.26E-05	8.18E-05	1.39E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 225	0-1.6 km	0.6626	4.15E-02	2.06E-02	1.04E-01	1.46E-01	2.18E-01	2.32E-01	4.01E-01	2.76E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-505 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related								
L-EDEWBODY 05 227	TOT LIF	0-16.1 km	1.0000	7.02E+02	3.43E+02	1.72E+03	2.44E+03	5.43E+03	7.11E+03	1.20E+04	6.66E-
L-EDEWBODY 05 345	TOT LIF	0-80.5 km	1.0000	8.25E+03	4.76E+03	2.08E+04	2.47E+04	3.19E+04	3.36E+04	4.69E+04	5.71E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0-80.5 km	1.0000	8.49E-05	4.74E-05	2.15E-04	2.59E-04	3.93E-04	6.33E-04	4.68E-04	6.33E-04	5.71E-
CAN FAT/TOTAL	0-16.1 km	1.0000	1.36E-03	6.40E-04	3.34E-03	4.75E-03	1.05E-02	1.24E-02	2.51E-02	2.51E-02	6.66E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 04 349	TOT LIF	0-1.6 km	1.0000	1.67E+01	1.24E+01	3.28E+01	4.30E+01	7.31E+01	7.80E+01	9.17E+01	8.75E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-506 of 1.4-801		

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

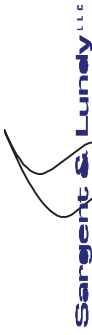
SOURCE TERM 7 OF 23:
 RC206

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 19:24:48	PAGE 40	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	8.46E+02	4.19E+02	2.19E+03	2.80E+03	3.91E+03	4.46E+03	6.14E+03	1.90E-	
05 288											
CAN FAT/TOTAL	0-16.1 km	1.0000	2.14E+01	1.48E+01	4.56E+01	6.07E+01	1.04E+02	1.10E+02	1.83E+02	1.40E-	
05 369											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	4.81E+02	3.43E+02	1.08E+03	1.43E+03	2.57E+03	3.03E+03	4.30E+03	1.40E-	
05 369											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.89E+04	9.49E+03	5.00E+04	6.27E+04	9.20E+04	1.02E+05	1.37E+05	1.90E-	
05 288											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	9.48E-05	4.58E-05	2.53E-04	3.25E-04	4.77E-04	5.15E-04	7.38E-04	9.51E-	
06 155											
CAN FAT/TOTAL	0-16.1 km	1.0000	2.02E-04	1.31E-04	4.47E-04	6.29E-04	1.01E-03	1.06E-03	1.46E-03	5.38E-	
05 183											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-510 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

POP.-DEPENDENT DECONTAMINATION COST 04 59	0.9997	3.74E+09	1.87E+09	1.03E+10	1.24E+10	1.87E+10	2.23E+10	4.61E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	0.9997	5.37E+07	4.43E+07	9.92E+07	1.12E+08	1.45E+08	1.62E+08	2.51E+08	3.42E-
POP.-DEPENDENT INTERDICTION COST 04 59	0.9997	1.05E+10	5.45E+09	2.94E+10	3.76E+10	5.58E+10	6.17E+10	1.14E+11	4.85E-
FARM-DEPENDENT INTERDICTION COST 04 59	1.0000	1.49E+08	1.14E+08	3.06E+08	3.54E+08	4.95E+08	5.30E+08	6.72E+08	3.42E-
POP.-DEPENDENT CONDEMNATION COST 05 210	0.1039	9.23E+05	0.00E+00	3.66E+05	1.78E+06	2.56E+07	5.47E+07	2.08E+08	5.71E-
FARM-DEPENDENT CONDEMNATION COST 04 2	0.9376	1.94E+06	1.02E+06	5.15E+06	6.37E+06	8.22E+06	8.96E+06	1.02E+07	6.19E-
EMERGENCY PHASE COST 05 288	0.9997	1.76E+08	8.77E+07	4.74E+08	6.64E+08	8.49E+08	9.28E+08	1.74E+09	1.90E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 04 155	1.0000	3.04E+06	1.25E+06	1.01E+07	1.24E+07	2.00E+07	2.20E+07	2.79E+07	8.09E-
CROP DISPOSAL COST 05 155	1.0000	1.45E+08	1.14E+08	2.51E+08	3.03E+08	3.59E+08	3.86E+08	5.20E+08	4.76E-
AFFECTED AREA/POPULATION FARM DECONTAMINATION (HECTARES) 04 59	0.9997	3.39E+04	2.64E+04	6.83E+04	7.45E+04	8.75E+04	9.38E+04	1.64E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	0.9997	4.31E+05	2.13E+05	1.23E+06	1.86E+06	2.41E+06	2.63E+06	4.45E+06	4.85E-
FARM INTERDICTION (HECTARES) 05 155	1.0000	6.20E+04	5.27E+04	1.15E+05	1.40E+05	2.02E+05	2.05E+05	2.28E+05	5.71E-
POP. INTERDICTION (INDIVIDUALS) 04 59	0.9997	4.31E+05	2.13E+05	1.23E+06	1.86E+06	2.41E+06	2.63E+06	4.45E+06	4.85E-
FARM CONDEMNATION (HECTARES) 04 2	0.9376	1.29E+02	6.64E+01	3.26E+02	4.38E+02	5.82E+02	6.31E+02	7.49E+02	6.19E-
POP. CONDEMNATION (INDIVIDUALS) 05 210	0.1039	3.16E+00	0.00E+00	2.07E+00	6.61E+00	1.01E+02	1.34E+02	6.63E+02	5.71E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No.	2009-11222	
Rev.	2	Date
Page	1.4-512 of 1.4-801	

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

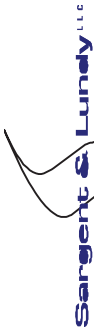
MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 42

SOURCE TERM 7 OF 23:
RC206

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km
L-EDEWBODY

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	PROB>=X	PROB>=X	PROB>=X
1.00E-07	1.00E+00	1.00E-05	1.00E-08
2.00E-07	1.00E+00	2.00E-05	2.00E-08
3.00E-07	1.00E+00	3.00E-05	3.00E-08
5.00E-07	1.00E+00	5.00E-05	5.00E-08
7.00E-07	1.00E+00	7.00E-05	7.00E-08
1.00E-06	1.00E+00	1.00E-04	1.00E-07
2.00E-06	1.00E+00	2.00E-04	2.00E-07
3.00E-06	1.00E+00	3.00E-04	3.00E-07
5.00E-06	1.00E+00	5.00E-04	5.00E-07
7.00E-06	1.00E+00	7.00E-04	7.00E-07
1.00E-05	1.00E+00	1.00E-03	1.00E-06
2.00E-05	1.00E+00	2.00E-03	2.00E-06
3.00E-05	1.00E+00	3.00E-03	3.00E-06
5.00E-05	1.00E+00	5.00E-03	5.00E-06
7.00E-05	1.00E+00	7.00E-03	7.00E-06
1.00E-04	1.00E+00	1.00E-02	1.00E-05
2.00E-04	1.00E+00	2.00E-02	2.00E-05
3.00E-04	1.00E+00	3.00E-02	3.00E-05
5.00E-04	1.00E+00	5.00E-02	5.00E-05
7.00E-04	1.00E+00	7.00E-02	7.00E-05
1.00E-03	9.99E-01	1.00E-01	1.00E-04
2.00E-03	9.99E-01	2.00E-01	2.00E-04



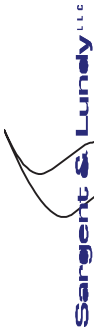
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.4-521 of 1.4-801		

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 224	0-16.1 km	0.4681	3.16E-01	0.00E+00	7.09E-01	1.69E+00	5.84E+00	1.01E+01	7.86E+01	2.04E-
L-EDEWBODY TOT LIF 06 210	0-80.5 km	1.0000	5.10E+03	1.90E+03	1.43E+04	2.08E+04	3.06E+04	3.20E+04	4.73E+04	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 249	0-80.5 km	1.0000	3.75E-05	1.27E-05	1.09E-04	1.49E-04	2.46E-04	2.87E-04	4.45E-04	1.52E-
CAN FAT/TOTAL 05 224	0-16.1 km	0.4681	2.97E-07	0.00E+00	6.50E-07	1.57E-06	5.58E-06	1.01E-05	7.38E-05	2.04E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 03 252	0-1.6 km	0.8459	1.89E-02	1.50E-03	4.35E-02	8.24E-02	1.54E-01	1.94E-01	3.46E-01	3.17E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-523 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 05 227	TOT LIF 0-16.1 km	1.0000	1.44E+02	3.69E+01	4.07E+02	5.88E+02	1.27E+03	1.75E+03	4.41E+03	6.66E-
L-EDEWBODY 06 210	TOT LIF 0-80.5 km	1.0000	5.24E+03	2.02E+03	1.45E+04	2.09E+04	3.07E+04	3.21E+04	4.88E+04	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 249	0-80.5 km	1.0000	3.88E-05	1.38E-05	1.11E-04	1.51E-04	2.48E-04	2.88E-04	4.46E-04	1.52E-
CAN FAT/TOTAL 05 227	0-16.1 km	1.0000	1.80E-04	3.49E-05	5.12E-04	7.57E-04	1.68E-03	2.36E-03	6.77E-03	6.66E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 370	0-1.6 km	1.0000	6.59E-01	3.35E-01	2.05E+00	2.84E+00	5.51E+00	6.57E+00	1.03E+01	1.14E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-524 of 1.4-801		

Client	PSEG Nuclear Development	Prepared by	
Project	PSEG ESPA	Reviewed by	
Proj. No	12380-001	Approved by	
	Equip. No.	Date	
		Date	
		Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

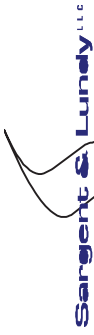
SOURCE TERM 8 OF 23:
 RC301

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 19:24:48	PAGE 46	PROB	QUANTILES					PEAK	PEAK	
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	CONC	PROB
TRIAL										
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.14E+03	5.33E+02	3.13E+03	4.07E+03	5.82E+03	6.42E+03	9.92E+03	1.19E-
04 250										
CAN FAT/TOTAL	0-16.1 km	0.9473	1.66E+01	7.72E+00	4.14E+01	5.92E+01	1.05E+02	1.23E+02	2.62E+02	5.38E-
05 183										
POPULATION DOSE (SV)										
L-EDEWBODY TOT LIF	0-16.1 km	0.9473	3.75E+02	1.78E+02	9.59E+02	1.30E+03	2.45E+03	3.05E+03	5.98E+03	5.38E-
05 183										
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	2.56E+04	1.18E+04	7.08E+04	9.56E+04	1.28E+05	1.44E+05	2.24E+05	1.19E-
04 250										
POPULATION WEIGHTED RISK										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.26E-04	5.65E-05	3.43E-04	4.83E-04	7.02E-04	7.43E-04	1.06E-03	1.19E-
04 250										
CAN FAT/TOTAL	0-16.1 km	0.9108	1.94E-04	8.93E-05	5.11E-04	7.11E-04	1.13E-03	1.23E-03	2.09E-03	6.46E-
06 164										

PEAK DOSE FOUND ON SPATIAL GRID (SV)



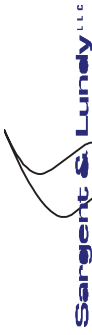
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.4-526 of 1.4-801		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 04 167	0.9473	2.80E-01	2.22E-01	5.75E-01	7.38E-01	1.74E+00	2.43E+00	4.65E+00	6.56E-
INGESTION OF OTHER MEAT CROPS 04 167	0.9473	5.05E-02	3.75E-02	1.01E-01	1.54E-01	3.03E-01	3.91E-01	6.53E-01	6.56E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 250	1.0000	2.56E+04	1.18E+04	7.08E+04	9.56E+04	1.28E+05	1.44E+05	2.24E+05	1.19E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 250	1.0000	2.32E+04	1.05E+04	6.35E+04	8.80E+04	1.17E+05	1.26E+05	1.95E+05	1.19E-
TOTAL INGESTION PATHWAYS DOSE 05 250	1.0000	2.54E+02	2.11E+02	4.83E+02	6.13E+02	9.13E+02	1.03E+03	1.62E+03	8.37E-
LONG-TERM GROUNDSHINE DOSE 04 250	1.0000	2.24E+04	1.02E+04	6.20E+04	8.52E+04	1.15E+05	1.24E+05	1.90E+05	1.19E-
LONG-TERM RESUSPENSION DOSE 05 326	1.0000	7.30E+02	3.24E+02	2.02E+03	2.94E+03	3.70E+03	4.06E+03	6.44E+03	1.90E-
WATER INGESTION DOSE 05 250	1.0000	1.14E+02	5.71E+01	2.95E+02	4.43E+02	7.75E+02	9.26E+02	1.40E+03	8.37E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page		1.4-528 of 1.4-801

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	Safety Related	Non-Safety Related
	X	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

POP. -DEPENDENT DECONTAMINATION COST 04 59	0.8719	5.09E+09	1.76E+09	1.37E+10	2.17E+10	3.54E+10	4.07E+10	6.85E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	0.8822	6.48E+07	5.25E+07	1.22E+08	1.46E+08	2.14E+08	2.38E+08	4.46E+08	3.42E-
POP. -DEPENDENT INTERDICTION COST 04 59	0.8719	1.27E+10	4.90E+09	3.74E+10	5.27E+10	7.65E+10	8.72E+10	1.46E+11	4.85E-
FARM-DEPENDENT INTERDICTION COST 04 59	0.9415	1.63E+08	1.20E+08	3.39E+08	4.21E+08	5.46E+08	5.79E+08	7.63E+08	3.42E-
POP. -DEPENDENT CONDEMNATION COST 04 1	0.0408	1.25E+06	0.00E+00	0.00E+00	0.00E+00	5.19E+07	7.90E+07	2.08E+08	6.99E-
FARM-DEPENDENT CONDEMNATION COST 05 75	0.2669	1.32E+05	0.00E+00	3.04E+05	5.50E+05	3.16E+06	4.03E+06	1.02E+07	3.25E-
EMERGENCY PHASE COST 04 59	0.8381	1.47E+08	5.40E+07	4.43E+08	6.37E+08	8.86E+08	9.96E+08	1.43E+09	4.85E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
MILK DISPOSAL COST 04 326	0.9329	4.26E+06	1.58E+06	1.21E+07	1.81E+07	2.23E+07	2.35E+07	2.86E+07	3.81E-
CROP DISPOSAL COST 04 326	0.9415	1.56E+08	1.27E+08	2.80E+08	3.19E+08	3.93E+08	4.29E+08	5.32E+08	3.81E-
AFFECTED AREA/POPULATION				0-80.5 km					
FARM DECONTAMINATION (HECTARES) 04 59	0.8822	3.41E+04	2.75E+04	7.18E+04	8.09E+04	1.07E+05	1.22E+05	2.06E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	0.8719	4.38E+05	1.80E+05	1.31E+06	2.00E+06	2.56E+06	2.85E+06	5.02E+06	4.85E-
FARM INTERDICTION (HECTARES) 04 326	0.9415	6.63E+04	5.58E+04	1.28E+05	1.59E+05	2.07E+05	2.12E+05	2.43E+05	1.52E-
POP. INTERDICTION (INDIVIDUALS) 04 59	0.8719	4.38E+05	1.80E+05	1.31E+06	2.00E+06	2.56E+06	2.85E+06	5.02E+06	4.85E-
FARM CONDEMNATION (HECTARES) 05 75	0.2669	8.82E+00	0.00E+00	2.19E+01	3.42E+01	2.12E+02	2.60E+02	7.49E+02	3.25E-
POP. CONDEMNATION (INDIVIDUALS) 04 1	0.0408	4.21E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+02	2.40E+02	6.63E+02	6.99E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-530 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 48

SOURCE TERM 8 OF 23:
RC301

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	1.00E-09	1.00E-07	1.00E-08
2.00E-08	1.00E+00	2.00E-07	2.00E-08
3.00E-08	1.00E+00	3.00E-07	3.00E-08
5.00E-08	1.00E+00	5.00E-07	5.00E-08
7.00E-08	1.00E+00	7.00E-07	7.00E-08
1.00E-07	1.00E+00	1.00E-06	1.00E-07
2.00E-07	1.00E+00	2.00E-06	2.00E-07
3.00E-07	1.00E+00	3.00E-06	3.00E-07
5.00E-07	1.00E+00	5.00E-06	5.00E-07
7.00E-07	1.00E+00	7.00E-06	7.00E-07
1.00E-06	1.00E+00	1.00E-05	1.00E-06
2.00E-06	1.00E+00	2.00E-05	2.00E-06
3.00E-06	1.00E+00	3.00E-05	3.00E-06
5.00E-06	1.00E+00	5.00E-05	5.00E-06
7.00E-06	1.00E+00	7.00E-05	7.00E-06
1.00E-05	1.00E+00	1.00E-04	1.00E-05
2.00E-05	1.00E+00	2.00E-04	2.00E-05
3.00E-05	1.00E+00	3.00E-04	3.00E-05
5.00E-05	1.00E+00	5.00E-04	5.00E-05
7.00E-05	1.00E+00	7.00E-04	7.00E-05
1.00E-04	1.00E+00	1.00E-03	1.00E-04
2.00E-04	1.00E+00	2.00E-03	2.00E-04
9.49E-01	8.07E-01	1.00E+00	7.44E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-539 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 224	0-16.1 km	0.4681	7.65E-01	0.00E+00	1.63E+00	4.05E+00	1.43E+01	2.13E+01	1.90E+02	2.04E-
L-EDEWBODY TOT LIF 06 210	0-80.5 km	1.0000	1.30E+04	4.65E+03	3.80E+04	5.44E+04	8.10E+04	9.19E+04	1.26E+05	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 249	0-80.5 km	1.0000	1.06E-04	3.35E-05	3.12E-04	4.50E-04	7.89E-04	9.04E-04	1.35E-03	1.52E-
CAN FAT/TOTAL 05 224	0-16.1 km	0.4681	7.62E-07	0.00E+00	1.56E-06	3.83E-06	1.39E-05	2.37E-05	1.95E-04	2.04E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 03 252	0-1.6 km	0.8459	4.38E-02	3.54E-03	9.34E-02	2.05E-01	3.96E-01	4.62E-01	8.76E-01	3.17E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-541 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 227	0-16.1 km	1.0000	3.82E+02	1.02E+02	1.06E+02	1.50E+03	3.47E+03	4.74E+03	1.16E+04	6.66E-
L-EDEWBODY TOT LIF 06 210	0-80.5 km	1.0000	1.34E+04	5.01E+03	3.88E+04	5.53E+04	8.21E+04	9.31E+04	1.30E+05	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 05 337	0-80.5 km	0.0005	7.57E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-08	1.24E-
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 05 337	3.2-4.8 km	0.0005	5.26E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.78E-04	1.24E-
CAN FAT/TOTAL 04 249	0-80.5 km	1.0000	1.10E-04	3.66E-05	3.20E-04	4.57E-04	7.95E-04	9.11E-04	1.35E-03	1.52E-
CAN FAT/TOTAL 05 227	0-16.1 km	1.0000	5.21E-04	1.09E-04	1.43E-03	2.22E-03	4.82E-03	7.21E-03	1.94E-02	6.66E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 337	0-1.6 km	1.0000	1.65E+00	8.19E-01	4.93E+00	6.71E+00	1.47E+01	1.83E+01	2.91E+01	2.47E-



Calcs. For ENVIRONMENTAL CONSEQUENCE ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No.	2009-11222		
Rev.	2	Date	
Page		1.4-542 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

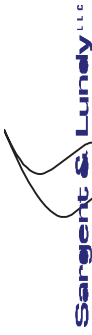
SOURCE TERM 9 OF 23:
 RC302

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 19:24:48	PAGE 52	PROB	QUANTILES					PEAK	PEAK	
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH		
TRIAL										
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.55E+03	7.06E+02	4.11E+03	5.48E+03	7.95E+03	8.92E+03	1.28E+04	1.41E-
05 40										
CAN FAT/TOTAL	0-16.1 km	0.9441	2.22E+01	1.03E+01	5.73E+01	7.78E+01	1.44E+02	1.83E+02	3.14E+02	1.45E-
05 352										
POPULATION DOSE (SV)										
L-EDEWBODY TOT LIF	0-16.1 km	0.9441	5.01E+02	2.33E+02	1.25E+03	1.75E+03	3.35E+03	4.05E+03	7.17E+03	1.45E-
05 352										
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	3.49E+04	1.61E+04	9.73E+04	1.18E+05	1.76E+05	2.02E+05	2.91E+05	1.41E-
05 40										
POPULATION WEIGHTED RISK										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.63E-04	7.33E-05	4.41E-04	6.01E-04	8.35E-04	9.23E-04	1.27E-03	1.41E-
05 40										
CAN FAT/TOTAL	0-16.1 km	0.9062	2.27E-04	1.02E-04	5.99E-04	8.25E-04	1.27E-03	1.46E-03	2.23E-03	1.45E-
05 352										

PEAK DOSE FOUND ON SPATIAL GRID (SV)



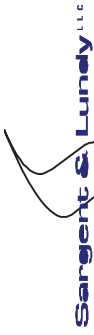
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.4-543 of 1.4-801	

Client PSEG Nuclear Development	Safety Related	Non-Safety Related	Prepared by	Date
Project PSEG ESPA	X		Reviewed by	Date
Proj. No 12380-001		Equip. No.	Approved by	Date

L-EDEWBODY 04 128	0-1.6 km	0.7553	5.44E-02	6.02E-02	1.02E-01	1.04E-01	1.10E-01	1.12E-01	1.22E-01	2.57E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 352	0-16.1 km	0.9441	5.01E+02	2.33E+02	1.25E+03	1.75E+03	3.35E+03	4.05E+03	7.17E+03	1.45E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 352		0.9062	3.13E+02	1.33E+02	8.29E+02	1.11E+03	2.00E+03	2.15E+03	3.08E+03	1.45E-
TOTAL INGESTION PATHWAYS DOSE 05 183		0.9441	3.46E+01	1.57E+01	8.62E+01	1.34E+02	3.15E+02	4.08E+02	1.28E+03	4.92E-
LONG-TERM GROUNDSHINE DOSE 05 352		0.9062	3.07E+02	1.29E+02	8.13E+02	1.09E+03	1.95E+03	2.12E+03	3.07E+03	1.45E-
LONG-TERM RESUSPENSION DOSE 04 307		0.9062	5.63E+00	2.23E+00	1.46E+01	2.07E+01	3.45E+01	3.87E+01	5.85E+01	1.33E-
WATER INGESTION DOSE 05 183		0.9187	2.89E+01	9.68E+00	7.59E+01	1.23E+02	3.06E+02	3.96E+02	1.26E+03	4.92E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 352		0.7456	1.47E+02	3.43E+01	3.89E+02	6.10E+02	1.40E+03	1.91E+03	3.94E+03	1.45E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 86		0.7792	6.50E+00	5.04E+00	1.58E+01	2.11E+01	3.11E+01	3.48E+01	6.84E+01	1.13E-
INGESTION OF GRAINS 05 185		0.9431	1.52E-01	1.16E-01	3.32E-01	4.19E-01	6.77E-01	7.65E-01	1.44E+00	1.87E-
INGESTION OF LEAF VEG 05 185		0.9431	7.43E-01	6.16E-01	1.62E+00	2.14E+00	3.26E+00	3.70E+00	7.08E+00	1.87E-
INGESTION OF ROOT CROPS 05 185		0.9431	3.49E-01	3.01E-01	7.77E-01	1.02E+00	1.49E+00	1.75E+00	3.28E+00	1.87E-
INGESTION OF FRUITS 05 185		0.9431	1.28E+00	1.04E+00	2.80E+00	3.54E+00	5.58E+00	6.49E+00	1.28E+01	1.87E-
INGESTION OF LEGUMES 05 185		0.9431	8.68E-01	7.28E-01	1.90E+00	2.48E+00	3.83E+00	4.47E+00	8.46E+00	1.87E-
INGESTION OF BEEF 05 274		0.9431	1.16E+00	7.12E-01	2.81E+00	3.84E+00	6.97E+00	7.68E+00	1.04E+01	2.06E-
INGESTION OF MILK 04 258		0.9431	8.01E-01	4.91E-01	1.87E+00	2.70E+00	4.78E+00	5.41E+00	7.57E+00	1.14E-



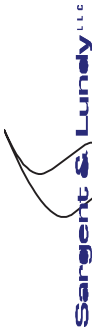
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No.	2009-11222	
Rev.	2	Date
Page	1.4-544 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

INGESTION OF POULTRY 04 181	0.9431	2.95E-01	2.15E-01	6.55E-01	9.56E-01	1.46E+00	1.73E+00	3.91E+00	1.05E-
INGESTION OF OTHER MEAT CROPS 04 258	0.9431	5.65E-02	3.30E-02	1.15E-01	1.83E-01	5.64E-01	6.67E-01	9.42E-01	1.14E-
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km TOTAL LONG-TERM PATHWAYS DOSE 05 40	1.0000	3.49E+04	1.61E+04	9.73E+04	1.18E+05	1.76E+05	2.02E+05	2.91E+05	1.41E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 40	1.0000	2.98E+04	1.34E+04	8.11E+04	1.04E+05	1.39E+05	1.58E+05	2.33E+05	1.41E-
TOTAL INGESTION PATHWAYS DOSE 05 250	1.0000	3.59E+02	2.79E+02	7.03E+02	9.89E+02	1.49E+03	1.77E+03	2.83E+03	8.37E-
LONG-TERM GROUNDSHINE DOSE 05 40	1.0000	2.89E+04	1.30E+04	7.86E+04	1.02E+05	1.32E+05	1.47E+05	2.26E+05	1.41E-
LONG-TERM RESUSPENSION DOSE 04 156	1.0000	9.65E+02	4.02E+02	2.65E+03	3.61E+03	5.24E+03	5.46E+03	6.84E+03	1.19E-
WATER INGESTION DOSE 05 250	1.0000	2.09E+02	1.02E+02	5.33E+02	8.05E+02	1.29E+03	1.49E+03	2.62E+03	8.37E-



Calcs. For ENVIRONMENTAL CONSEQUENCE				Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				Rev. 2	Date
Safety Related	X	Non-Safety Related		Page 1.4-546 of 1.4-801	
Client PSEG Nuclear Development		Prepared by		Date	
Project PSEG ESPA		Reviewed by		Date	
Proj. No 12380-001		Approved by		Date	
Equip. No.					

POP.-DEPENDENT DECONTAMINATION COST 04 59	0.8848	6.65E+09	2.73E+09	2.06E+10	2.84E+10	3.89E+10	4.38E+10	6.96E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	0.8951	8.36E+07	6.83E+07	1.56E+08	2.01E+08	2.58E+08	2.87E+08	4.55E+08	3.42E-
POP.-DEPENDENT INTERDICTION COST 05 236	0.8848	1.86E+10	7.92E+09	5.57E+10	7.23E+10	1.03E+11	1.21E+11	2.18E+11	1.46E-
FARM-DEPENDENT INTERDICTION COST 04 326	0.9728	1.90E+08	1.45E+08	3.73E+08	4.74E+08	5.97E+08	6.50E+08	7.75E+08	1.52E-
POP.-DEPENDENT CONDEMNATION COST 05 74	0.0841	2.18E+07	0.00E+00	0.00E+00	1.04E+07	6.58E+08	1.21E+09	6.24E+09	6.30E-
FARM-DEPENDENT CONDEMNATION COST 05 75	0.4384	4.45E+05	0.00E+00	4.60E+05	1.89E+06	8.51E+06	2.15E+07	3.63E+07	3.88E-
EMERGENCY PHASE COST 04 59	0.9106	2.98E+08	1.29E+08	9.02E+08	1.07E+09	1.30E+09	1.42E+09	1.88E+09	4.85E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
MILK DISPOSAL COST 04 326	0.9607	4.71E+06	1.85E+06	1.30E+07	2.00E+07	2.27E+07	2.40E+07	2.93E+07	3.81E-
CROP DISPOSAL COST 04 329	0.9728	1.72E+08	1.43E+08	3.01E+08	3.32E+08	4.19E+08	4.63E+08	5.50E+08	1.43E-
AFFECTED AREA/POPULATION FARM DECONTAMINATION (HECTARES) 04 59	0.8951	4.30E+04	3.60E+04	8.27E+04	9.95E+04	1.35E+05	1.54E+05	2.15E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	0.8848	5.46E+05	2.46E+05	1.51E+06	2.12E+06	3.11E+06	3.58E+06	5.21E+06	4.85E-
FARM INTERDICTION (HECTARES) 04 329	0.9728	7.27E+04	6.19E+04	1.35E+05	1.68E+05	2.11E+05	2.19E+05	2.50E+05	3.52E-
POP. INTERDICTION (INDIVIDUALS) 04 59	0.8848	5.46E+05	2.46E+05	1.51E+06	2.12E+06	3.11E+06	3.58E+06	5.21E+06	4.85E-
FARM CONDEMNATION (HECTARES) 05 75	0.4384	2.79E+01	0.00E+00	2.85E+01	1.24E+02	6.05E+02	1.16E+03	2.66E+03	3.88E-
POP. CONDEMNATION (INDIVIDUALS) 05 74	0.0841	7.40E+01	0.00E+00	0.00E+00	5.09E+01	2.32E+03	4.90E+03	1.99E+04	6.30E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	

MILK DISPOSAL AREA (HECTARES)	0.9664	6.77E+04	5.69E+04	1.30E+05	1.61E+05	2.07E+05	2.13E+05	2.43E+05	1.52E-
04 326									
CROP DISPOSAL AREA (HECTARES)	0.9728	7.28E+04	6.20E+04	1.35E+05	1.68E+05	2.11E+05	2.19E+05	2.50E+05	3.52E-
04 329									

Rev.	2	Date
Page	1.4-547 of 1.4-801	

Prepared by	Date
Reviewed by	Date
Approved by	Date



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.4-549 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related						
		</							



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-557 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

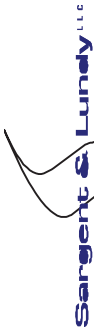
L-EDEWBODY 05 225	TOT LIF	0-16.1 km	0.4682	4.15E-01	0.00E+00	9.26E-01	2.24E+00	7.12E+00	1.08E+01	9.18E+01	3.61E-
L-EDEWBODY 04 249	TOT LIF	0-80.5 km	1.0000	6.73E+03	2.46E+03	1.99E+04	2.75E+04	3.97E+04	4.54E+04	6.57E+04	2.00E-

POPULATION WEIGHTED RISK

ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 249	0-80.5 km	1.0000	5.53E-05	1.82E-05	1.55E-04	2.29E-04	3.67E-04	4.24E-04	6.54E-04	1.52E-	
CAN FAT/TOTAL 05 225	0-16.1 km	0.4682	4.19E-07	0.00E+00	9.26E-07	2.24E-06	7.18E-06	1.18E-05	9.08E-05	3.61E-	

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 03 252	0-1.6 km	0.8459	2.39E-02	1.82E-03	4.60E-02	1.13E-01	2.27E-01	2.73E-01	5.00E-01	3.17E-
----------------------	----------	--------	----------	----------	----------	----------	----------	----------	----------	--------



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-559 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 227	0-16.1 km	1.0000	1.73E+02	4.39E+01	5.06E+02	7.14E+02	1.53E+03	2.13E+03	5.73E+03	6.66E-
L-EDEWBODY TOT LIF 06 210	0-80.5 km	1.0000	6.90E+03	2.60E+03	2.03E+04	2.82E+04	4.08E+04	4.71E+04	6.72E+04	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 249	0-80.5 km	1.0000	5.71E-05	1.99E-05	1.59E-04	2.32E-04	3.80E-04	4.48E-04	6.55E-04	1.52E-
CAN FAT/TOTAL 05 227	0-16.1 km	1.0000	2.37E-04	4.87E-05	6.85E-04	9.81E-04	2.32E-03	3.16E-03	9.85E-03	6.66E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 337	0-1.6 km	1.0000	7.74E-01	3.48E-01	2.09E+00	2.87E+00	7.62E+00	9.25E+00	1.38E+01	2.47E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-560 of 1.4-801		

Client	PSEG Nuclear Development	Prepared by	
Project	PSEG ESPA	Reviewed by	
Proj. No	12380-001	Approved by	
	Equip. No.		

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

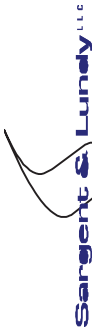
SOURCE TERM 10 OF 23:
 RC303

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10	19:24:48	PAGE	58	PROB	QUANTILES	PEAK	PEAK					
				NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PEAK
HEALTH EFFECTS CASES												
CAN FAT/TOTAL												
04	250	0-80.5	km	1.0000	1.14E+03	5.27E+02	3.11E+03	4.06E+03	6.00E+03	6.76E+03	1.09E+04	1.19E-
CAN FAT/TOTAL												
06	164	0-16.1	km	0.9439	1.63E+01	7.42E+00	4.12E+01	5.89E+01	1.09E+02	1.31E+02	2.80E+02	6.46E-
POPULATION DOSE (Sv)												
L-EDEWBODY TOT LIF												
06	164	0-16.1	km	0.9439	3.67E+02	1.72E+02	9.27E+02	1.30E+03	2.47E+03	3.01E+03	6.40E+03	6.46E-
L-EDEWBODY TOT LIF												
04	250	0-80.5	km	1.0000	2.56E+04	1.19E+04	7.05E+04	9.11E+04	1.26E+05	1.42E+05	2.47E+05	1.19E-
POPULATION WEIGHTED RISK												
CAN FAT/TOTAL												
04	250	0-80.5	km	1.0000	1.25E-04	5.65E-05	3.33E-04	4.63E-04	6.93E-04	7.64E-04	1.15E-03	1.19E-
CAN FAT/TOTAL												
06	164	0-16.1	km	0.9101	1.84E-04	8.35E-05	4.74E-04	6.73E-04	1.12E-03	1.24E-03	2.12E-03	6.46E-

PEAK DOSE FOUND ON SPATIAL GRID (SV)



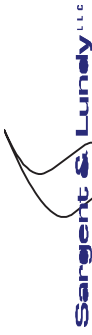
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.4-561 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 32	0-1.6 km	0.8038	5.89E-02	6.25E-02	1.03E-01	1.05E-01	1.11E-01	1.13E-01	1.23E-01	4.00E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 06 164	0-16.1 km	0.9439	3.67E+02	1.72E+02	9.27E+02	1.30E+03	2.47E+03	3.01E+03	6.40E+03	6.46E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 06 164		0.9101	2.53E+02	1.07E+02	6.63E+02	9.32E+02	1.51E+03	1.84E+03	2.94E+03	6.46E-
TOTAL INGESTION PATHWAYS DOSE 05 183		0.9439	2.15E+01	1.17E+01	5.23E+01	8.29E+01	1.68E+02	2.29E+02	7.56E+02	4.92E-
LONG-TERM GROUNDSHINE DOSE 06 164		0.9101	2.48E+02	1.04E+02	6.51E+02	9.18E+02	1.50E+03	1.83E+03	2.93E+03	6.46E-
LONG-TERM RESUSPENSION DOSE 05 111		0.9101	5.53E+00	2.00E+00	1.49E+01	2.17E+01	3.44E+01	3.87E+01	5.70E+01	9.51E-
WATER INGESTION DOSE 05 368		0.9164	1.61E+01	5.31E+00	4.11E+01	7.48E+01	1.60E+02	2.23E+02	7.42E+02	1.28E-
POP.-DEPENDENT DECONTAMINATION DOSE 06 370		0.7421	8.84E+01	1.93E+01	2.35E+02	3.73E+02	9.13E+02	1.20E+03	3.60E+03	6.46E-
FARM-DEPENDENT DECONTAMINATION DOSE 06 164		0.7625	3.85E+00	2.71E+00	8.87E+00	1.23E+01	2.26E+01	2.72E+01	4.52E+01	5.90E-
INGESTION OF GRAINS 06 364		0.9439	1.43E-01	1.17E-01	3.09E-01	3.79E-01	5.81E-01	6.78E-01	1.41E+00	9.51E-
INGESTION OF LEAF VEG 05 184		0.9439	7.97E-01	7.32E-01	1.63E+00	2.10E+00	3.15E+00	3.59E+00	7.38E+00	1.43E-
INGESTION OF ROOT CROPS 05 184		0.9439	3.61E-01	3.23E-01	7.76E-01	9.39E-01	1.36E+00	1.58E+00	3.42E+00	1.43E-
INGESTION OF FRUITS 05 202		0.9439	1.13E+00	1.03E+00	2.37E+00	2.92E+00	4.27E+00	5.01E+00	1.14E+01	1.33E-
INGESTION OF LEGUMES 05 184		0.9439	9.21E-01	8.45E-01	2.02E+00	2.43E+00	3.54E+00	4.08E+00	8.85E+00	1.43E-
INGESTION OF BEEF 05 309		0.9439	9.23E-01	7.27E-01	2.12E+00	2.84E+00	4.81E+00	5.32E+00	9.90E+00	4.92E-
INGESTION OF MILK 04 288		0.9439	8.17E-01	5.36E-01	1.81E+00	3.00E+00	6.17E+00	7.23E+00	1.00E+01	1.90E-



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-564 of 1.4-801

Client	PSEG Nuclear Development		Prepared by		Date	
Project	PSEG ESPA		Reviewed by		Date	
Proj. No	12380-001	Equip. No.	Approved by		Date	

POP.-DEPENDENT DECONTAMINATION COST 04 59	0.8757	5.31E+09	1.82E+09	1.46E+10	2.27E+10	3.59E+10	4.10E+10	6.85E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	0.8757	6.70E+07	5.44E+07	1.25E+08	1.50E+08	2.17E+08	2.40E+08	4.46E+08	3.42E-
POP.-DEPENDENT INTERDICTION COST 04 59	0.8757	1.31E+10	5.10E+09	3.91E+10	5.37E+10	7.73E+10	8.85E+10	1.45E+11	4.85E-
FARM-DEPENDENT INTERDICTION COST 04 326	0.9537	1.62E+08	1.19E+08	3.38E+08	4.22E+08	5.48E+08	5.81E+08	7.62E+08	1.52E-
POP.-DEPENDENT CONDEMNATION COST 05 55	0.0445	3.18E+06	0.00E+00	0.00E+00	0.00E+00	6.21E+07	1.00E+08	6.22E+09	8.18E-
FARM-DEPENDENT CONDEMNATION COST 05 75	0.2436	1.35E+05	0.00E+00	2.67E+05	5.37E+05	3.28E+06	4.20E+06	1.02E+07	3.25E-
EMERGENCY PHASE COST 05 288	0.8472	1.67E+08	6.55E+07	4.91E+08	6.84E+08	1.00E+09	1.06E+09	1.74E+09	1.90E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 04 326	0.9313	4.24E+06	1.54E+06	1.21E+07	1.81E+07	2.25E+07	2.38E+07	2.93E+07	3.81E-
CROP DISPOSAL COST 04 326	0.9537	1.56E+08	1.25E+08	2.79E+08	3.15E+08	3.75E+08	4.04E+08	5.32E+08	3.81E-
AFFECTED AREA/POPULATION		0-80.5 km							
FARM DECONTAMINATION (HECTARES) 04 59	0.8757	3.46E+04	2.80E+04	7.23E+04	8.15E+04	1.08E+05	1.23E+05	2.06E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	0.8757	4.43E+05	1.85E+05	1.32E+06	2.00E+06	2.56E+06	2.85E+06	5.02E+06	4.85E-
FARM INTERDICTION (HECTARES) 04 326	0.9537	6.61E+04	5.55E+04	1.28E+05	1.59E+05	2.07E+05	2.13E+05	2.43E+05	1.52E-
POP. INTERDICTION (INDIVIDUALS) 04 59	0.8757	4.43E+05	1.85E+05	1.32E+06	2.00E+06	2.56E+06	2.85E+06	5.02E+06	4.85E-
FARM CONDEMNATION (HECTARES) 05 75	0.2436	8.95E+00	0.00E+00	2.12E+01	3.30E+01	2.19E+02	2.70E+02	7.49E+02	3.25E-
POP. CONDEMNATION (INDIVIDUALS) 05 55	0.0445	1.07E+01	0.00E+00	0.00E+00	0.00E+00	1.73E+02	3.36E+02	1.98E+04	8.18E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-566 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

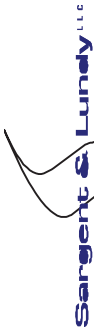
MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 60

SOURCE TERM 10 OF 23:
RC303

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	1.00E-09	1.00E-07	1.00E-08
2.00E-08	1.00E+00	2.00E-07	2.00E-08
3.00E-08	1.00E+00	3.00E-07	3.00E-08
5.00E-08	1.00E+00	5.00E-07	5.00E-08
7.00E-08	1.00E+00	7.00E-07	7.00E-08
1.00E-07	1.00E+00	1.00E-06	1.00E-07
2.00E-07	1.00E+00	2.00E-06	2.00E-07
3.00E-07	1.00E+00	3.00E-06	3.00E-07
5.00E-07	1.00E+00	5.00E-06	5.00E-07
7.00E-07	1.00E+00	7.00E-06	7.00E-07
1.00E-06	1.00E+00	1.00E-05	1.00E-06
2.00E-06	1.00E+00	2.00E-05	2.00E-06
3.00E-06	1.00E+00	3.00E-05	3.00E-06
5.00E-06	1.00E+00	5.00E-05	5.00E-06
7.00E-06	1.00E+00	7.00E-05	7.00E-06
1.00E-05	1.00E+00	1.00E-04	1.00E-05
2.00E-05	1.00E+00	2.00E-04	2.00E-05
3.00E-05	1.00E+00	3.00E-04	3.00E-05
5.00E-05	1.00E+00	5.00E-04	5.00E-05
7.00E-05	1.00E+00	7.00E-04	7.00E-05
1.00E-04	1.00E+00	1.00E-03	1.00E-04
2.00E-04	1.00E+00	2.00E-03	2.00E-04
9.97E-01	8.25E-01	8.25E-01	7.39E-01



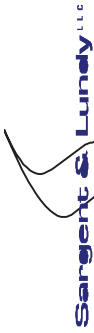
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page 1.4-575 of 1.4-801		

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related								
L-EDEWBODY 05 225	TOT LIF	0-16.1 km	0.4682	1.13E+00	0.00E+00	2.38E+00	5.73E+00	2.01E+01	3.26E+01	2.38E+02	1.56E-
L-EDEWBODY 04 249	TOT LIF	0-80.5 km	1.0000	1.85E+04	5.90E+03	5.60E+04	7.98E+04	1.16E+05	1.28E+05	2.06E+05	2.00E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0-80.5 km	1.0000	1.53E-04	4.20E-05	4.47E-04	6.84E-04	1.10E-03	1.21E-03	1.94E-03	1.94E-03	2.00E-
CAN FAT/TOTAL	0-16.1 km	0.4682	1.04E-06	0.00E+00	2.10E-06	4.72E-06	1.94E-05	3.37E-05	2.07E-04	2.07E-04	2.04E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 03 252	0-1.6 km	0.8459	5.69E-02	3.18E-03	1.48E-01	2.18E-01	5.90E-01	6.68E-01	1.53E+00	1.53E+00	3.17E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.4-577 of 1.4-801	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

L-EDEWBODY 05 227	TOT LIF	0-16.1 km	1.0000	4.38E+02	1.08E+02	1.19E+03	1.73E+03	3.77E+03	5.21E+03	1.55E+04	6.66E-
L-EDEWBODY 06 210	TOT LIF	0-80.5 km	1.0000	1.89E+04	6.30E+03	5.69E+04	8.12E+04	1.17E+05	1.28E+05	2.09E+05	9.51E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0	0-80.5 km	1.0000	1.57E-04	4.72E-05	4.57E-04	7.05E-04	1.06E-03	1.13E-03	1.97E-03	9.51E-
CAN FAT/TOTAL	0	0-16.1 km	1.0000	5.86E-04	1.04E-04	1.64E-03	2.47E-03	5.62E-03	7.55E-03	2.47E-02	6.66E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 04 301		0-1.6 km	1.0000	1.58E+00	7.00E-01	3.53E+00	6.55E+00	1.45E+01	1.82E+01	3.56E+01	3.61E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-578 of 1.4-801		

Client PSEG Nuclear Development	X	Non-Safety Related	
Project PSEG ESPA			Prepared by
Proj. No 12380-001		Equip. No.	Date
			Reviewed by
			Date
			Approved by
			Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

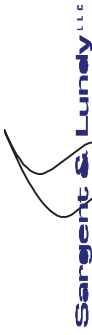
SOURCE TERM 11 OF 23:
 RC304

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 19:24:48	PAGE 64	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.69E+03	7.77E+02	4.79E+03	6.06E+03	8.64E+03	9.82E+03	1.34E+04	1.19E-	
04 250											
CAN FAT/TOTAL	0-16.1 km	0.9438	2.25E+01	1.06E+01	5.75E+01	7.81E+01	1.42E+02	1.80E+02	3.07E+02	1.95E-	
04 266											
POPULATION DOSE (SV)											
L-EDEWBODY TOT LIF	0-16.1 km	0.9438	5.08E+02	2.38E+02	1.26E+03	1.75E+03	3.28E+03	3.92E+03	7.04E+03	1.95E-	
04 266											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	3.86E+04	1.78E+04	1.07E+05	1.30E+05	2.01E+05	2.15E+05	3.08E+05	1.19E-	
04 250											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.73E-04	7.80E-05	5.04E-04	6.31E-04	8.84E-04	1.00E-03	1.31E-03	1.19E-	
04 308											
CAN FAT/TOTAL	0-16.1 km	0.8954	2.21E-04	9.92E-05	5.80E-04	7.85E-04	1.25E-03	1.44E-03	2.20E-03	1.95E-	
04 266											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No.	2009-11222		
Rev.	2	Date	
Page		1.4-582 of 1.4-801	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

POP.-DEPENDENT DECONTAMINATION COST 04 59	0.8987	7.28E+09	3.05E+09	2.23E+10	3.04E+10	4.10E+10	4.67E+10	8.05E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	0.8987	9.11E+07	7.51E+07	1.78E+08	2.15E+08	2.86E+08	3.21E+08	5.22E+08	3.42E-
POP.-DEPENDENT INTERDICTION COST 05 236	0.8987	2.22E+10	9.76E+09	6.38E+10	8.08E+10	1.25E+11	1.50E+11	3.18E+11	1.46E-
FARM-DEPENDENT INTERDICTION COST 04 326	0.9849	1.98E+08	1.53E+08	3.92E+08	5.04E+08	6.44E+08	7.04E+08	7.96E+08	1.52E-
POP.-DEPENDENT CONDEMNATION COST 05 80	0.1032	4.32E+07	0.00E+00	5.38E+05	5.31E+07	1.23E+09	1.69E+09	6.31E+09	2.04E-
FARM-DEPENDENT CONDEMNATION COST 05 199	0.4586	1.50E+06	0.00E+00	2.25E+06	9.45E+06	2.79E+07	3.18E+07	1.02E+08	3.79E-
EMERGENCY PHASE COST 04 59	0.9053	2.97E+08	1.27E+08	9.05E+08	1.07E+09	1.28E+09	1.39E+09	1.82E+09	4.85E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 04 326	0.9591	4.69E+06	1.82E+06	1.29E+07	1.98E+07	2.27E+07	2.39E+07	2.93E+07	3.81E-
CROP DISPOSAL COST 04 326	0.9849	1.72E+08	1.41E+08	2.96E+08	3.26E+08	3.98E+08	4.34E+08	5.71E+08	3.14E-
AFFECTED AREA/POPULATION 0-80.5 km									
FARM DECONTAMINATION (HECTARES) 04 59	0.8987	4.72E+04	3.89E+04	9.18E+04	1.11E+05	1.61E+05	1.88E+05	2.19E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	0.8987	6.03E+05	2.93E+05	1.63E+06	2.26E+06	3.61E+06	4.32E+06	5.26E+06	4.85E-
FARM INTERDICTION (HECTARES) 05 326	0.9849	7.23E+04	6.11E+04	1.35E+05	1.68E+05	2.10E+05	2.17E+05	2.64E+05	7.61E-
POP. INTERDICTION (INDIVIDUALS) 04 59	0.8987	6.03E+05	2.93E+05	1.63E+06	2.26E+06	3.61E+06	4.32E+06	5.26E+06	4.85E-
FARM CONDEMNATION (HECTARES) 05 199	0.4586	9.01E+01	0.00E+00	1.34E+02	6.73E+02	1.78E+03	2.10E+03	6.95E+03	1.10E-
POP. CONDEMNATION (INDIVIDUALS) 05 80	0.1032	1.46E+02	0.00E+00	2.31E+00	1.44E+02	5.13E+03	6.29E+03	2.01E+04	2.04E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-584 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
	Date
	Date
	Date

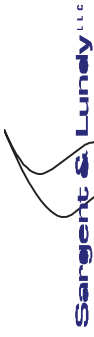
MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 66

SOURCE TERM 11 OF 23:
RC304

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km
L-EDEWBODY

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-07	1.00E-08	1.00E-06	1.00E-07
2.00E-07	1.00E+00	2.00E-06	2.00E-07
3.00E-07	1.00E+00	3.00E-06	3.00E-07
5.00E-07	1.00E+00	5.00E-06	5.00E-07
7.00E-07	1.00E+00	7.00E-06	7.00E-07
1.00E-06	1.00E+00	1.00E-05	1.00E-06
2.00E-06	1.00E+00	2.00E-05	2.00E-06
3.00E-06	1.00E+00	3.00E-05	3.00E-06
5.00E-06	1.00E+00	5.00E-05	5.00E-06
7.00E-06	1.00E+00	7.00E-05	7.00E-06
1.00E-05	1.00E+00	1.00E-04	1.00E-05
2.00E-05	1.00E+00	2.00E-04	2.00E-05
3.00E-05	1.00E+00	3.00E-04	3.00E-05
5.00E-05	1.00E+00	5.00E-04	5.00E-05
7.00E-05	1.00E+00	7.00E-04	7.00E-05
1.00E-04	1.00E+00	1.00E-03	1.00E-04
2.00E-04	1.00E+00	2.00E-03	2.00E-04
3.00E-04	9.97E-01	3.00E-03	3.00E-04
5.00E-04	9.48E-01	5.00E-03	5.00E-04
7.00E-04	9.19E-01	7.00E-03	7.00E-04
1.00E-03	8.81E-01	1.00E-02	1.00E-03
2.00E-03	8.35E-01	2.00E-02	2.00E-03



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
		Page 1.4-595 of 1.4-801	
Safety Related	X	Non-Safety Related	

Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

L-EDEWBODY 05 276	TOT LIF	0-16.1 km	1.0000	6.11E+01	1.11E+01	1.74E+02	2.67E+02	5.34E+02	6.81E+02	2.05E+03	6.66E-
L-EDEWBODY 06 210	TOT LIF	0-80.5 km	1.0000	3.80E+03	1.18E+03	1.10E+04	1.55E+04	2.79E+04	3.11E+04	5.80E+04	9.51E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL		0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL		0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL		0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL		3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL		0-80.5 km	1.0000	2.40E-05	7.20E-06	7.20E-05	1.04E-04	1.75E-04	2.10E-04	3.81E-04	9.51E-
CAN FAT/TOTAL		0-16.1 km	1.0000	5.55E-05	8.99E-06	1.49E-04	2.37E-04	5.53E-04	7.24E-04	2.47E-03	6.66E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 03 359		0-1.6 km	1.0000	1.27E-01	3.69E-02	1.79E-01	2.88E-01	2.32E+00	2.90E+00	4.67E+00	3.17E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-596 of 1.4-801		

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

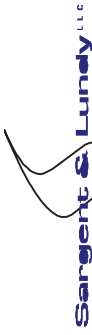
SOURCE TERM 12 OF 23:
 RC401

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 19:24:48	PAGE 70	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	PEAK	PEAK
QUANTILES											
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	4.53E+02	1.77E+02	1.27E+03	1.98E+03	2.81E+03	3.11E+03	5.50E+03	1.41E-	
05 40											
CAN FAT/TOTAL	0-16.1 km	0.9010	5.62E+00	1.55E+00	1.44E+01	2.34E+01	4.96E+01	6.34E+01	1.29E+02	5.38E-	
05 183											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	0.9010	1.29E+02	3.62E+01	3.45E+02	5.40E+02	1.16E+03	1.48E+03	3.08E+03	5.38E-	
05 183											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.07E+04	4.14E+03	3.19E+04	4.55E+04	7.09E+04	7.71E+04	1.30E+05	1.41E-	
05 40											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	5.18E-05	1.91E-05	1.47E-04	2.27E-04	3.38E-04	3.72E-04	6.08E-04	1.08E-	
05 24											
CAN FAT/TOTAL	0-16.1 km	0.8691	6.68E-05	1.42E-05	1.95E-04	2.83E-04	5.96E-04	7.22E-04	1.13E-03	4.09E-	
05 358											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



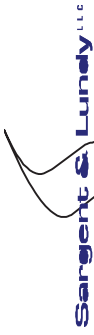
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.4-597 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 274	0-1.6 km	0.8257	2.37E-02	1.31E-02	6.93E-02	9.51E-02	1.07E-01	1.10E-01	1.23E-01	4.00E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 183	0-16.1 km	0.9010	1.29E+02	3.62E+01	3.45E+02	5.40E+02	1.16E+03	1.48E+03	3.08E+03	5.38E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 358		0.8691	9.64E+01	2.11E+01	2.83E+02	4.25E+02	8.67E+02	1.03E+03	1.66E+03	4.09E-
TOTAL INGESTION PATHWAYS DOSE 05 183		0.9009	1.29E+01	8.63E+00	3.19E+01	4.26E+01	7.51E+01	8.97E+01	2.46E+02	4.92E-
LONG-TERM GROUNDSHINE DOSE 05 358		0.8691	7.46E+01	1.56E+01	2.09E+02	3.20E+02	7.06E+02	8.81E+02	1.39E+03	4.09E-
LONG-TERM RESUSPENSION DOSE 05 358		0.8691	2.19E+01	4.97E+00	6.39E+01	9.34E+01	2.00E+02	2.11E+02	3.03E+02	3.64E-
WATER INGESTION DOSE 05 183		0.8749	3.79E+00	9.63E-01	9.61E+00	1.81E+01	4.62E+01	6.79E+01	2.46E+02	4.92E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 183		0.6455	1.97E+01	9.84E-01	4.24E+01	9.23E+01	3.04E+02	3.97E+02	1.64E+03	5.38E-
FARM-DEPENDENT DECONTAMINATION DOSE 06 164		0.6465	4.92E-01	7.32E-02	1.30E+00	2.17E+00	3.84E+00	4.62E+00	1.13E+01	5.90E-
INGESTION OF GRAINS 06 203		0.8987	2.67E-01	1.80E-01	7.02E-01	8.71E-01	1.34E+00	1.59E+00	3.02E+00	5.90E-
INGESTION OF LEAF VEG 06 203		0.8987	2.05E+00	1.32E+00	5.11E+00	7.18E+00	1.06E+01	1.16E+01	3.05E+01	5.90E-
INGESTION OF ROOT CROPS 06 203		0.8987	1.32E+00	9.12E-01	3.27E+00	4.49E+00	7.18E+00	8.21E+00	1.94E+01	5.90E-
INGESTION OF FRUITS 06 203		0.8987	6.63E-01	4.87E-01	1.56E+00	2.08E+00	3.08E+00	3.38E+00	8.65E+00	5.90E-
INGESTION OF LEGUMES 06 203		0.8987	2.40E+00	1.46E+00	6.17E+00	8.25E+00	1.22E+01	1.40E+01	3.70E+01	5.90E-
INGESTION OF BEEF 04 319		0.8987	7.76E-01	3.95E-01	2.23E+00	3.11E+00	4.69E+00	5.21E+00	7.78E+00	1.64E-
INGESTION OF MILK 04 275		0.8987	1.26E+00	8.50E-01	3.15E+00	4.03E+00	6.42E+00	7.37E+00	1.32E+01	1.78E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No.	2009-11222	
Rev.	2	Date
Page	1.4-598 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	0.8987	2.44E-01	1.06E-01	6.63E-01	9.55E-01	1.62E+00	2.01E+00	3.53E+00	1.24E-
INGESTION OF POULTRY 04 170	0.8987	2.44E-01	1.06E-01	6.63E-01	9.55E-01	1.62E+00	2.01E+00	3.53E+00	1.24E-
INGESTION OF OTHER MEAT CROPS 06 203	0.8987	1.11E-01	7.99E-02	2.57E-01	3.44E-01	5.87E-01	7.00E-01	1.51E+00	4.94E-
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km									
TOTAL LONG-TERM PATHWAYS DOSE 05 40	1.0000	1.07E+04	4.14E+03	3.19E+04	4.55E+04	7.09E+04	7.71E+04	1.30E+05	1.41E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 24	1.0000	9.94E+03	3.64E+03	3.10E+04	4.28E+04	6.37E+04	7.18E+04	1.17E+05	1.08E-
TOTAL INGESTION PATHWAYS DOSE 05 41	1.0000	1.78E+02	1.39E+02	3.54E+02	4.36E+02	6.03E+02	6.76E+02	1.03E+03	2.39E-
LONG-TERM GROUNDSHINE DOSE 05 24	1.0000	7.54E+03	2.80E+03	2.24E+04	3.26E+04	5.08E+04	5.56E+04	8.86E+04	1.08E-
LONG-TERM RESUSPENSION DOSE 05 24	1.0000	2.40E+03	8.74E+02	7.44E+03	1.04E+04	1.40E+04	1.59E+04	2.82E+04	1.08E-
WATER INGESTION DOSE 05 236	1.0000	3.04E+01	1.73E+01	7.26E+01	1.09E+02	2.09E+02	2.41E+02	4.84E+02	1.03E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page 1.4-602 of 1.4-801	
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 72

SOURCE TERM 12 OF 23:
RC401

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km
L-EDEWBODY

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	1.00E+00	1.00E-07	1.00E-08
2.00E-08	1.00E+00	2.00E-07	2.00E-08
3.00E-08	1.00E+00	3.00E-07	3.00E-08
5.00E-08	1.00E+00	5.00E-07	5.00E-08
7.00E-08	1.00E+00	7.00E-07	7.00E-08
1.00E-07	1.00E+00	1.00E-06	1.00E-07
2.00E-07	1.00E+00	2.00E-06	2.00E-07
3.00E-07	1.00E+00	3.00E-06	3.00E-07
5.00E-07	1.00E+00	5.00E-06	5.00E-07
7.00E-07	1.00E+00	7.00E-06	7.00E-07
1.00E-06	1.00E+00	1.00E-05	1.00E-06
2.00E-06	1.00E+00	2.00E-05	2.00E-06
3.00E-06	1.00E+00	3.00E-05	3.00E-06
5.00E-06	1.00E+00	5.00E-05	5.00E-06
7.00E-06	1.00E+00	7.00E-05	7.00E-06
1.00E-05	1.00E+00	1.00E-04	1.00E-05
2.00E-05	1.00E+00	2.00E-04	2.00E-05
3.00E-05	1.00E+00	3.00E-04	3.00E-05
5.00E-05	1.00E+00	5.00E-04	5.00E-05
7.00E-05	1.00E+00	7.00E-04	7.00E-05
1.00E-04	1.00E+00	1.00E-03	1.00E-04
2.00E-04	1.00E+00	2.00E-03	2.00E-04
8.38E-01	8.38E+00	9.67E-01	6.85E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-614 of 1.4-801		

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

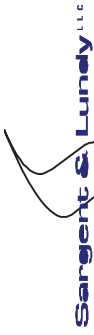
SOURCE TERM 13 OF 23:
 RC402

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 19:24:48	PAGE 76	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	9.80E+02	4.31E+02	2.70E+03	3.51E+03	5.42E+03	6.13E+03	8.91E+03	8.91E+03	4.85E-
04 85											
CAN FAT/TOTAL	0-16.1 km	0.9306	1.30E+01	5.61E+00	3.40E+01	5.01E+01	8.19E+01	1.01E+02	2.30E+02	2.30E+02	2.26E-
05 195											
POPULATION DOSE (SV)											
L-EDEWBODY TOT LIF	0-16.1 km	0.9306	2.96E+02	1.22E+02	7.67E+02	1.10E+03	1.86E+03	2.30E+03	5.32E+03	5.32E+03	2.26E-
05 195											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	2.25E+04	9.95E+03	6.25E+04	8.52E+04	1.22E+05	1.37E+05	2.06E+05	2.06E+05	4.85E-
04 85											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.09E-04	4.68E-05	3.11E-04	4.22E-04	6.40E-04	7.10E-04	1.00E-03	1.00E-03	9.51E-
06 155											
CAN FAT/TOTAL	0-16.1 km	0.8801	1.61E-04	6.20E-05	4.26E-04	6.32E-04	9.50E-04	1.04E-03	1.82E-03	1.82E-03	1.40E-
05 163											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

INGESTION OF POULTRY 04 168	0.9306	2.26E-01	1.24E-01	5.41E-01	8.40E-01	1.69E+00	2.10E+00	4.26E+00	2.09E-
INGESTION OF OTHER MEAT CROPS 04 192	0.9306	1.11E-01	8.05E-02	2.54E-01	3.39E-01	6.14E-01	7.55E-01	1.35E+00	1.14E-
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km									
TOTAL LONG-TERM PATHWAYS DOSE 04 85	1.0000	2.25E+04	9.95E+03	6.25E+04	8.52E+04	1.22E+05	1.37E+05	2.06E+05	4.85E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 06 155	1.0000	2.05E+04	8.66E+03	5.76E+04	7.98E+04	1.09E+05	1.15E+05	1.88E+05	9.51E-
TOTAL INGESTION PATHWAYS DOSE 05 236	1.0000	3.31E+02	2.82E+02	6.32E+02	7.62E+02	1.02E+03	1.07E+03	1.57E+03	1.03E-
LONG-TERM GROUNDSHINE DOSE 06 155	1.0000	1.83E+04	7.66E+03	5.21E+04	7.19E+04	1.02E+05	1.07E+05	1.67E+05	9.51E-
LONG-TERM RESUSPENSION DOSE 06 155	1.0000	2.21E+03	9.52E+02	6.30E+03	8.74E+03	1.12E+04	1.18E+04	2.07E+04	9.51E-
WATER INGESTION DOSE 05 236	1.0000	9.58E+01	5.29E+01	2.35E+02	3.47E+02	6.28E+02	7.30E+02	1.08E+03	1.03E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

MILK DISPOSAL AREA (HECTARES)	0.9075	5.88E+04	4.95E+04	1.25E+05	1.56E+05	2.09E+05	2.17E+05	2.43E+05	5.61E-04
CROP DISPOSAL AREA (HECTARES)	0.9270	6.33E+04	5.38E+04	1.28E+05	1.60E+05	2.10E+05	2.17E+05	2.43E+05	5.61E-04



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-620 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
	Date
	Date
	Date

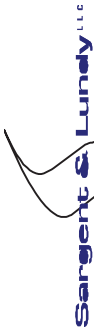
MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 78

SOURCE TERM 13 OF 23:
RC402

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	0.00E+00	1.00E-07	1.00E-08
2.00E-08	0.00E+00	2.00E-07	2.00E-08
3.00E-08	0.00E+00	3.00E-07	3.00E-08
5.00E-08	0.00E+00	5.00E-07	5.00E-08
7.00E-08	0.00E+00	7.00E-07	7.00E-08
1.00E-07	0.00E+00	1.00E-06	1.00E-07
2.00E-07	0.00E+00	2.00E-06	2.00E-07
3.00E-07	0.00E+00	3.00E-06	3.00E-07
5.00E-07	0.00E+00	5.00E-06	5.00E-07
7.00E-07	0.00E+00	7.00E-06	7.00E-07
1.00E-06	0.00E+00	1.00E-05	1.00E-06
2.00E-06	0.00E+00	2.00E-05	2.00E-06
3.00E-06	0.00E+00	3.00E-05	3.00E-06
5.00E-06	0.00E+00	5.00E-05	5.00E-06
7.00E-06	0.00E+00	7.00E-05	7.00E-06
1.00E-05	0.00E+00	1.00E-04	1.00E-05
2.00E-05	0.00E+00	2.00E-04	2.00E-05
3.00E-05	0.00E+00	3.00E-04	3.00E-05
5.00E-05	0.00E+00	5.00E-04	5.00E-05
7.00E-05	0.00E+00	7.00E-04	7.00E-05
1.00E-04	0.00E+00	1.00E-03	1.00E-04
2.00E-04	0.00E+00	2.00E-03	2.00E-04
8.90E-04	0.00E+00	9.63E-03	7.32E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-631 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 276	0-16.1 km	1.0000	6.11E+01	1.11E+01	1.74E+02	2.67E+02	5.34E+02	6.81E+02	2.05E+03	6.66E-
L-EDEWBODY TOT LIF 06 210	0-80.5 km	1.0000	3.80E+03	1.18E+03	1.10E+04	1.55E+04	2.79E+04	3.11E+04	5.80E+04	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 06 210	0-80.5 km	1.0000	2.40E-05	7.20E-06	7.20E-05	1.04E-04	1.75E-04	2.10E-04	3.81E-04	9.51E-
CAN FAT/TOTAL 05 276	0-16.1 km	1.0000	5.55E-05	8.99E-06	1.49E-04	2.37E-04	5.53E-04	7.24E-04	2.47E-03	6.66E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 03 359	0-1.6 km	1.0000	1.27E-01	3.69E-02	1.79E-01	2.88E-01	2.32E+00	2.90E+00	4.67E+00	3.17E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-632 of 1.4-801		

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

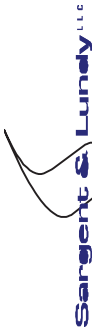
SOURCE TERM 14 OF 23:
 RC403

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 19:24:48	PAGE 82	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	CONS	PROB	
TRIAL										
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	4.53E+02	1.77E+02	1.27E+03	1.98E+03	2.81E+03	3.11E+03	5.50E+03	1.41E-
05 40										
CAN FAT/TOTAL	0-16.1 km	0.9010	5.62E+00	1.55E+00	1.44E+01	2.34E+01	4.96E+01	6.34E+01	1.29E+02	5.38E-
05 183										
POPULATION DOSE (SV)										
L-EDEWBODY TOT LIF	0-16.1 km	0.9010	1.29E+02	3.62E+01	3.45E+02	5.40E+02	1.16E+03	1.48E+03	3.08E+03	5.38E-
05 183										
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.07E+04	4.14E+03	3.19E+04	4.55E+04	7.09E+04	7.71E+04	1.30E+05	1.41E-
05 40										
POPULATION WEIGHTED RISK										
CAN FAT/TOTAL	0-80.5 km	1.0000	5.18E-05	1.91E-05	1.47E-04	2.27E-04	3.38E-04	3.72E-04	6.08E-04	1.08E-
05 24										
CAN FAT/TOTAL	0-16.1 km	0.8691	6.68E-05	1.42E-05	1.95E-04	2.83E-04	5.96E-04	7.22E-04	1.13E-03	4.09E-
05 358										

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.4-633 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 274	0-1.6 km	0.8257	2.37E-02	1.31E-02	6.93E-02	9.51E-02	1.07E-01	1.10E-01	1.23E-01	4.00E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 183	0-16.1 km	0.9010	1.29E+02	3.62E+01	3.45E+02	5.40E+02	1.16E+03	1.48E+03	3.08E+03	5.38E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 358		0.8691	9.64E+01	2.11E+01	2.83E+02	4.25E+02	8.67E+02	1.03E+03	1.66E+03	4.09E-
TOTAL INGESTION PATHWAYS DOSE 05 183		0.9009	1.29E+01	8.63E+00	3.19E+01	4.26E+01	7.51E+01	8.97E+01	2.46E+02	4.92E-
LONG-TERM GROUNDSHINE DOSE 05 358		0.8691	7.46E+01	1.56E+01	2.09E+02	3.20E+02	7.06E+02	8.81E+02	1.39E+03	4.09E-
LONG-TERM RESUSPENSION DOSE 05 358		0.8691	2.19E+01	4.97E+00	6.39E+01	9.34E+01	2.00E+02	2.11E+02	3.03E+02	3.64E-
WATER INGESTION DOSE 05 183		0.8749	3.79E+00	9.63E-01	9.61E+00	1.81E+01	4.62E+01	6.79E+01	2.46E+02	4.92E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 183		0.6455	1.97E+01	9.84E-01	4.24E+01	9.23E+01	3.04E+02	3.97E+02	1.64E+03	5.38E-
FARM-DEPENDENT DECONTAMINATION DOSE 06 164		0.6465	4.92E-01	7.32E-02	1.30E+00	2.17E+00	3.84E+00	4.62E+00	1.13E+01	5.90E-
INGESTION OF GRAINS 06 203		0.8987	2.67E-01	1.80E-01	7.02E-01	8.71E-01	1.34E+00	1.59E+00	3.02E+00	5.90E-
INGESTION OF LEAF VEG 06 203		0.8987	2.05E+00	1.32E+00	5.11E+00	7.18E+00	1.06E+01	1.16E+01	3.05E+01	5.90E-
INGESTION OF ROOT CROPS 06 203		0.8987	1.32E+00	9.12E-01	3.27E+00	4.49E+00	7.18E+00	8.21E+00	1.94E+01	5.90E-
INGESTION OF FRUITS 06 203		0.8987	6.63E-01	4.87E-01	1.56E+00	2.08E+00	3.08E+00	3.38E+00	8.65E+00	5.90E-
INGESTION OF LEGUMES 06 203		0.8987	2.40E+00	1.46E+00	6.17E+00	8.25E+00	1.22E+01	1.40E+01	3.70E+01	5.90E-
INGESTION OF BEEF 04 319		0.8987	7.76E-01	3.95E-01	2.23E+00	3.11E+00	4.69E+00	5.21E+00	7.78E+00	1.64E-
INGESTION OF MILK 04 275		0.8987	1.26E+00	8.50E-01	3.15E+00	4.03E+00	6.42E+00	7.37E+00	1.32E+01	1.78E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-638 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
	Date
	Date
	Date

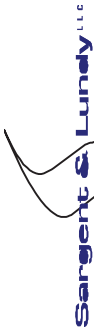
MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 84

SOURCE TERM 14 OF 23:
RC403

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	0.00E+00	1.00E-07	1.00E-08
2.00E-08	0.00E+00	2.00E-07	2.00E-08
3.00E-08	0.00E+00	3.00E-07	3.00E-08
5.00E-08	0.00E+00	5.00E-07	5.00E-08
7.00E-08	0.00E+00	7.00E-07	7.00E-08
1.00E-07	0.00E+00	1.00E-06	1.00E-07
2.00E-07	0.00E+00	2.00E-06	2.00E-07
3.00E-07	0.00E+00	3.00E-06	3.00E-07
5.00E-07	0.00E+00	5.00E-06	5.00E-07
7.00E-07	0.00E+00	7.00E-06	7.00E-07
1.00E-06	0.00E+00	1.00E-05	1.00E-06
2.00E-06	0.00E+00	2.00E-05	2.00E-06
3.00E-06	0.00E+00	3.00E-05	3.00E-06
5.00E-06	0.00E+00	5.00E-05	5.00E-06
7.00E-06	0.00E+00	7.00E-05	7.00E-06
1.00E-05	0.00E+00	1.00E-04	1.00E-05
2.00E-05	0.00E+00	2.00E-04	2.00E-05
3.00E-05	0.00E+00	3.00E-04	3.00E-05
5.00E-05	0.00E+00	5.00E-04	5.00E-05
7.00E-05	0.00E+00	7.00E-04	7.00E-05
1.00E-04	0.00E+00	1.00E-03	1.00E-04
2.00E-04	0.00E+00	2.00E-03	2.00E-04
8.38E-01	0.00E+00	9.67E-01	6.85E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-649 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 168	0-16.1 km	1.0000	9.41E+01	2.61E+01	2.71E+02	3.71E+02	8.02E+02	1.03E+03	3.56E+03	1.90E-
L-EDEWBODY TOT LIF 06 172	0-80.5 km	1.0000	6.71E+03	2.29E+03	2.01E+04	2.82E+04	4.19E+04	4.90E+04	7.19E+04	9.51E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 06 172	0-80.5 km	1.0000	4.15E-05	1.35E-05	1.20E-04	1.77E-04	2.71E-04	3.05E-04	5.13E-04	9.51E-
CAN FAT/TOTAL 05 168	0-16.1 km	1.0000	8.55E-05	2.09E-05	2.37E-04	3.60E-04	7.71E-04	1.06E-03	4.61E-03	1.90E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 300	0-1.6 km	1.0000	1.30E-01	5.70E-02	1.83E-01	3.28E-01	3.24E+00	4.48E+00	7.12E+00	2.76E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-650 of 1.4-801		

Client	PSEG Nuclear Development	Prepared by	
Project	PSEG ESPA	Reviewed by	
Proj. No	12380-001	Approved by	
	Equip. No.	Date	
		Date	
		Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

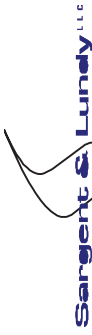
SOURCE TERM 15 OF 23:
RC404

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 19:24:48	PAGE 88	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	PEAK	PEAK
QUANTILES											
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	9.80E+02	4.31E+02	2.70E+03	3.51E+03	5.42E+03	6.13E+03	8.91E+03	4.85E-	
04 85											
CAN FAT/TOTAL	0-16.1 km	0.9306	1.30E+01	5.61E+00	3.40E+01	5.01E+01	8.19E+01	1.01E+02	2.30E+02	2.26E-	
05 195											
POPULATION DOSE (SV)											
L-EDEWBODY TOT LIF	0-16.1 km	0.9306	2.96E+02	1.22E+02	7.67E+02	1.10E+03	1.86E+03	2.30E+03	5.32E+03	2.26E-	
05 195											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	2.25E+04	9.95E+03	6.25E+04	8.52E+04	1.22E+05	1.37E+05	2.06E+05	4.85E-	
04 85											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.09E-04	4.68E-05	3.11E-04	4.22E-04	6.40E-04	7.10E-04	1.00E-03	9.51E-	
06 155											
CAN FAT/TOTAL	0-16.1 km	0.8801	1.61E-04	6.20E-05	4.26E-04	6.32E-04	9.50E-04	1.04E-03	1.82E-03	1.40E-	
05 163											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



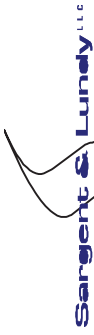
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.4-651 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 303	0-1.6 km	0.8694	3.36E-02	2.98E-02	8.64E-02	1.01E-01	1.08E-01	1.10E-01	1.23E-01	2.47E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 195	0-16.1 km	0.9306	2.96E+02	1.22E+02	7.67E+02	1.10E+03	1.86E+03	2.30E+03	5.32E+03	2.26E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 163		0.8801	2.27E+02	8.77E+01	6.03E+02	8.77E+02	1.31E+03	1.50E+03	2.59E+03	1.40E-
TOTAL INGESTION PATHWAYS DOSE 05 195		0.9306	2.25E+01	1.34E+01	5.37E+01	7.50E+01	1.52E+02	2.02E+02	6.02E+02	2.06E-
LONG-TERM GROUNDSHINE DOSE 05 163		0.8801	2.05E+02	8.23E+01	5.50E+02	7.68E+02	1.20E+03	1.37E+03	2.53E+03	1.40E-
LONG-TERM RESUSPENSION DOSE 05 202		0.8801	2.15E+01	8.48E+00	5.75E+01	7.75E+01	1.09E+02	1.15E+02	1.78E+02	1.45E-
WATER INGESTION DOSE 05 195		0.9019	9.93E+00	2.72E+00	2.78E+01	4.36E+01	1.13E+02	1.51E+02	5.65E+02	2.06E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 195		0.7340	4.54E+01	6.14E+00	1.08E+02	2.18E+02	5.86E+02	7.86E+02	2.75E+03	2.26E-
FARM-DEPENDENT DECONTAMINATION DOSE 04 59		0.7340	1.43E+00	8.70E-01	3.35E+00	5.55E+00	9.90E+00	1.24E+01	2.07E+01	7.52E-
INGESTION OF GRAINS 04 59		0.9306	3.30E-01	2.66E-01	7.46E-01	9.52E-01	1.62E+00	2.03E+00	3.31E+00	7.52E-
INGESTION OF LEAF VEG 04 59		0.9306	2.93E+00	2.29E+00	6.62E+00	8.66E+00	1.50E+01	1.88E+01	3.21E+01	7.52E-
INGESTION OF ROOT CROPS 04 59		0.9306	1.86E+00	1.32E+00	4.17E+00	5.58E+00	9.88E+00	1.24E+01	2.07E+01	7.52E-
INGESTION OF FRUITS 05 202		0.9306	1.11E+00	9.12E-01	2.39E+00	3.03E+00	5.34E+00	6.39E+00	1.25E+01	1.33E-
INGESTION OF LEGUMES 04 59		0.9306	3.50E+00	2.71E+00	7.95E+00	1.06E+01	1.86E+01	2.34E+01	3.89E+01	7.52E-
INGESTION OF BEEF 05 276		0.9306	7.97E-01	5.05E-01	2.01E+00	2.94E+00	4.34E+00	5.05E+00	1.02E+01	1.90E-
INGESTION OF MILK 04 231		0.9306	1.76E+00	1.13E+00	4.33E+00	5.71E+00	8.87E+00	1.01E+01	1.26E+01	1.14E-



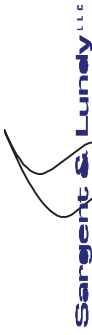
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-652 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

INGESTION OF POULTRY 04 168	0.9306	2.26E-01	1.24E-01	5.41E-01	8.40E-01	1.69E+00	2.10E+00	4.26E+00	2.09E-
INGESTION OF OTHER MEAT CROPS 04 192	0.9306	1.11E-01	8.05E-02	2.54E-01	3.39E-01	6.14E-01	7.55E-01	1.35E+00	1.14E-
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km									
TOTAL LONG-TERM PATHWAYS DOSE 04 85	1.0000	2.25E+04	9.95E+03	6.25E+04	8.52E+04	1.22E+05	1.37E+05	2.06E+05	4.85E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 06 155	1.0000	2.05E+04	8.66E+03	5.76E+04	7.98E+04	1.09E+05	1.15E+05	1.88E+05	9.51E-
TOTAL INGESTION PATHWAYS DOSE 05 236	1.0000	3.31E+02	2.82E+02	6.32E+02	7.62E+02	1.02E+03	1.07E+03	1.57E+03	1.03E-
LONG-TERM GROUNDSHINE DOSE 06 155	1.0000	1.83E+04	7.66E+03	5.21E+04	7.19E+04	1.02E+05	1.07E+05	1.67E+05	9.51E-
LONG-TERM RESUSPENSION DOSE 06 155	1.0000	2.21E+03	9.52E+02	6.30E+03	8.74E+03	1.12E+04	1.18E+04	2.07E+04	9.51E-
WATER INGESTION DOSE 05 236	1.0000	9.58E+01	5.29E+01	2.35E+02	3.47E+02	6.28E+02	7.30E+02	1.08E+03	1.03E-



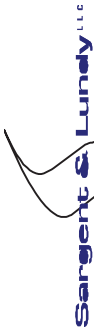
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev. 2	Date
Page 1.4-654 of 1.4-801	

Client PSEG Nuclear Development	X	Non-Safety Related	
Project PSEG ESPA		Prepared by	Date
Proj. No 12380-001		Reviewed by	Date
Equip. No.		Approved by	Date

POP.-DEPENDENT DECONTAMINATION COST 04 59	0.8609	4.57E+09	1.41E+09	1.26E+10	2.02E+10	3.26E+10	3.56E+10	4.80E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	0.8609	5.71E+07	4.29E+07	1.16E+08	1.37E+08	2.03E+08	2.24E+08	3.63E+08	3.42E-
POP.-DEPENDENT INTERDICTION COST 04 59	0.8609	1.09E+10	3.95E+09	3.26E+10	4.44E+10	6.70E+10	8.10E+10	1.28E+11	4.85E-
FARM-DEPENDENT INTERDICTION COST 04 59	0.9270	1.53E+08	1.11E+08	3.36E+08	4.17E+08	5.55E+08	5.95E+08	7.97E+08	3.42E-
POP.-DEPENDENT CONDEMNATION COST 04 26	0.0134	4.60E+05	0.00E+00	0.00E+00	0.00E+00	1.07E+06	2.06E+07	2.08E+08	3.27E-
FARM-DEPENDENT CONDEMNATION COST 05 86	0.2006	8.90E+05	0.00E+00	8.03E+05	3.77E+06	2.41E+07	2.83E+07	4.13E+07	1.13E-
EMERGENCY PHASE COST 06 147	0.8147	1.56E+08	5.58E+07	4.72E+08	6.48E+08	9.28E+08	1.02E+09	1.37E+09	9.51E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
MILK DISPOSAL COST 04 59	0.8942	4.14E+06	1.41E+06	1.20E+07	1.89E+07	2.31E+07	2.46E+07	2.93E+07	7.80E-
CROP DISPOSAL COST 04 59	0.9270	1.50E+08	1.19E+08	2.81E+08	3.21E+08	4.02E+08	4.42E+08	5.32E+08	7.80E-
AFFECTED AREA/POPULATION 0-80.5 km									
FARM DECONTAMINATION (HECTARES) 04 59	0.8609	3.04E+04	2.38E+04	6.54E+04	7.73E+04	1.05E+05	1.20E+05	2.16E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	0.8609	4.05E+05	1.56E+05	1.23E+06	1.86E+06	2.48E+06	2.75E+06	5.21E+06	4.85E-
FARM INTERDICTION (HECTARES) 04 329	0.9270	6.33E+04	5.37E+04	1.28E+05	1.60E+05	2.08E+05	2.14E+05	2.43E+05	2.19E-
POP. INTERDICTION (INDIVIDUALS) 04 59	0.8609	4.05E+05	1.56E+05	1.23E+06	1.86E+06	2.48E+06	2.75E+06	5.21E+06	4.85E-
FARM CONDEMNATION (HECTARES) 05 86	0.2006	5.40E+01	0.00E+00	4.83E+01	2.45E+02	1.40E+03	1.82E+03	3.02E+03	1.13E-
POP. CONDEMNATION (INDIVIDUALS) 04 26	0.0134	1.54E+00	0.00E+00	0.00E+00	0.00E+00	5.17E+00	8.38E+01	6.63E+02	3.27E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

MILK DISPOSAL AREA (HECTARES)	0.9075	5.88E+04	4.95E+04	1.25E+05	1.56E+05	2.09E+05	2.17E+05	2.43E+05	5.61E-04
CROP DISPOSAL AREA (HECTARES)	0.9270	6.33E+04	5.38E+04	1.28E+05	1.60E+05	2.10E+05	2.17E+05	2.43E+05	5.61E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222								
ANALYSIS FOR PSEG ESPA										
Safety Related	X	Non-Safety Related								
<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">Client PSEG Nuclear Development</td> <td style="width: 50%;">Prepared by</td> </tr> <tr> <td>Project PSEG ESPA</td> <td>Reviewed by</td> </tr> <tr> <td>Proj. No 12380-001</td> <td>Approved by</td> </tr> <tr> <td>Equip. No.</td> <td>Date</td> </tr> </table>			Client PSEG Nuclear Development	Prepared by	Project PSEG ESPA	Reviewed by	Proj. No 12380-001	Approved by	Equip. No.	Date
Client PSEG Nuclear Development	Prepared by									
Project PSEG ESPA	Reviewed by									
Proj. No 12380-001	Approved by									
Equip. No.	Date									
		Rev. 2 Date								
		Page 1.4-656 of 1.4-801								

MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 90

SOURCE TERM 15 OF 23:
RC404

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL		EMER. RESP. # 1		EMER. RESP. # 2		CHRONC RESULTS	
X	PROB>=X	X	PROB>=X	X	PROB>=X	X	PROB>=X
1.00E-08	1.00E+00	0.00E+00	0.00E+00	1.00E-07	1.00E+00	1.00E-08	8.07E-01
2.00E-08	1.00E+00	0.00E+00	0.00E+00	2.00E-07	1.00E+00	2.00E-08	8.07E-01
3.00E-08	1.00E+00	0.00E+00	0.00E+00	3.00E-07	1.00E+00	3.00E-08	8.07E-01
5.00E-08	1.00E+00	0.00E+00	0.00E+00	5.00E-07	1.00E+00	5.00E-08	8.07E-01
7.00E-08	1.00E+00	0.00E+00	0.00E+00	7.00E-07	1.00E+00	7.00E-08	7.99E-01
1.00E-07	1.00E+00	0.00E+00	0.00E+00	1.00E-06	1.00E+00	1.00E-07	7.96E-01
2.00E-07	1.00E+00	0.00E+00	0.00E+00	2.00E-06	1.00E+00	2.00E-07	7.96E-01
3.00E-07	1.00E+00	0.00E+00	0.00E+00	3.00E-06	1.00E+00	3.00E-07	7.96E-01
5.00E-07	1.00E+00	0.00E+00	0.00E+00	5.00E-06	1.00E+00	5.00E-07	7.96E-01
7.00E-07	1.00E+00	0.00E+00	0.00E+00	7.00E-06	1.00E+00	7.00E-07	7.96E-01
1.00E-06	1.00E+00	0.00E+00	0.00E+00	1.00E-05	1.00E+00	1.00E-06	7.96E-01
2.00E-06	1.00E+00	0.00E+00	0.00E+00	2.00E-05	1.00E+00	2.00E-06	7.89E-01
3.00E-06	1.00E+00	0.00E+00	0.00E+00	3.00E-05	1.00E+00	3.00E-06	7.87E-01
5.00E-06	1.00E+00	0.00E+00	0.00E+00	5.00E-05	1.00E+00	5.00E-06	7.84E-01
7.00E-06	1.00E+00	0.00E+00	0.00E+00	7.00E-05	1.00E+00	7.00E-06	7.84E-01
1.00E-05	1.00E+00	0.00E+00	0.00E+00	1.00E-04	1.00E+00	1.00E-05	7.84E-01
2.00E-05	1.00E+00	0.00E+00	0.00E+00	2.00E-04	1.00E+00	2.00E-05	7.72E-01
3.00E-05	1.00E+00	0.00E+00	0.00E+00	3.00E-04	1.00E+00	3.00E-05	7.64E-01
5.00E-05	1.00E+00	0.00E+00	0.00E+00	5.00E-04	1.00E+00	5.00E-05	7.38E-01
7.00E-05	9.92E-01	0.00E+00	0.00E+00	7.00E-04	1.00E+00	7.00E-05	7.38E-01
1.00E-04	9.63E-01	0.00E+00	0.00E+00	1.00E-03	1.00E+00	1.00E-04	7.38E-01
2.00E-04	8.90E-01	0.00E+00	0.00E+00	2.00E-03	9.63E-01	2.00E-04	7.32E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related		
Client PSEG Nuclear Development		Prepared by		
Project PSEG ESPA		Reviewed by		
Proj. No 12380-001		Approved by		
Equip. No.		Date		

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 16 OF 23:
 RC501

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION

10-JAN-10 19:24:48	PAGE 92	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	5.13E+01	1.75E+01	1.43E+02	2.24E+02	3.30E+02	3.57E+02	6.62E+02	9.51E-
06										
CAN FAT/TOTAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										
EARLY dose L-EDEWBODY > 0.250 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										

POPULATION DOSE (Sv)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-668 of 1.4-801		

Client	PSEG Nuclear Development	Prepared by	
Project	PSEG ESPA	Reviewed by	
Proj. No	12380-001	Approved by	
	Equip. No.	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

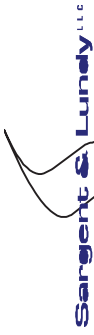
SOURCE TERM 16 OF 23:
RC501

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10	19:24:48	PAGE	94	PROB	QUANTILES	PEAK	PEAK					
				NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PEAK
HEALTH EFFECTS CASES												
CAN FAT/TOTAL	04	30	0-80.5 km	1.0000	1.98E+02	7.52E+01	5.64E+02	7.98E+02	1.37E+03	1.68E+03	3.03E+03	1.57E-
CAN FAT/TOTAL	05	184	0-16.1 km	0.9146	2.89E+00	8.65E-01	7.52E+00	1.15E+01	2.92E+01	3.44E+01	6.46E+01	1.56E-
POPULATION DOSE (Sv)												
L-EDEWBODY TOT LIF	05	184	0-16.1 km	0.9146	6.48E+01	1.95E+01	1.60E+02	2.64E+02	6.54E+02	7.90E+02	1.46E+03	1.56E-
L-EDEWBODY TOT LIF	04	30	0-80.5 km	1.0000	4.46E+03	1.60E+03	1.23E+04	1.84E+04	3.06E+04	3.73E+04	6.84E+04	1.57E-
POPULATION WEIGHTED RISK												
CAN FAT/TOTAL	04	30	0-80.5 km	1.0000	2.38E-05	8.33E-06	6.92E-05	9.97E-05	1.68E-04	2.06E-04	3.72E-04	1.57E-
CAN FAT/TOTAL	04	59	0-16.1 km	0.8686	4.36E-05	1.00E-05	1.16E-04	1.82E-04	4.44E-04	5.51E-04	1.03E-03	1.33E-

PEAK DOSE FOUND ON SPATIAL GRID (SV)



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page 1.4-670 of 1.4-801		

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related							
INGESTION OF POULTRY 05 163	0.9146		3.11E-01	1.61E-01	8.11E-01	1.05E+00	1.49E+00	1.74E+00	3.71E+00	1.28E-
INGESTION OF OTHER MEAT CROPS 05 183	0.9146		1.86E-01	9.45E-02	5.30E-01	7.80E-01	1.13E+00	1.22E+00	2.17E+00	4.92E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 30	1.0000		4.46E+03	1.60E+03	1.23E+04	1.84E+04	3.06E+04	3.73E+04	6.84E+04	1.57E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 30	1.0000		4.37E+03	1.49E+03	1.22E+04	1.83E+04	3.06E+04	3.73E+04	6.83E+04	1.57E-
TOTAL INGESTION PATHWAYS DOSE 04 386	1.0000		8.96E+01	6.60E+01	2.04E+02	2.50E+02	3.51E+02	3.91E+02	5.36E+02	3.33E-
LONG-TERM GROUNDSHINE DOSE 04 30	1.0000		4.27E+03	1.46E+03	1.19E+04	1.73E+04	2.98E+04	3.64E+04	6.68E+04	1.57E-
LONG-TERM RESUSPENSION DOSE 04 30	1.0000		9.78E+01	3.43E+01	2.85E+02	3.96E+02	6.82E+02	8.38E+02	1.53E+03	1.57E-
WATER INGESTION DOSE 05 236	1.0000		2.66E+00	1.19E+00	7.10E+00	1.07E+01	1.90E+01	2.27E+01	3.51E+01	1.03E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

MILK DISPOSAL AREA (HECTARES)	0.6153	1.69E+04	3.86E+03	5.27E+04	6.94E+04	9.58E+04	1.08E+05	1.70E+05	3.42E-04
CROP DISPOSAL AREA (HECTARES)	0.7531	2.30E+04	1.27E+04	6.10E+04	7.85E+04	1.17E+05	1.35E+05	2.16E+05	3.42E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 96

SOURCE TERM 16 OF 23:
RC501

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km
L-EDEWBODY

PEOPLE FRACTION = 0.9500 0.0500

OVERALL		EMER. RESP. # 1		EMER. RESP. # 2		CHRONC RESULTS	
X	PROB>=X	X	PROB>=X	X	PROB>=X	X	PROB>=X
1.00E-08	1.00E+00	0.00E+00	0.00E+00	1.00E-07	1.00E+00	1.00E-08	8.13E-01
2.00E-08	1.00E+00	0.00E+00	0.00E+00	2.00E-07	1.00E+00	2.00E-08	8.13E-01
3.00E-08	1.00E+00	0.00E+00	0.00E+00	3.00E-07	1.00E+00	3.00E-08	8.01E-01
5.00E-08	1.00E+00	0.00E+00	0.00E+00	5.00E-07	1.00E+00	5.00E-08	7.93E-01
7.00E-08	1.00E+00	0.00E+00	0.00E+00	7.00E-07	1.00E+00	7.00E-08	7.93E-01
1.00E-07	1.00E+00	0.00E+00	0.00E+00	1.00E-06	1.00E+00	1.00E-07	7.79E-01
2.00E-07	1.00E+00	0.00E+00	0.00E+00	2.00E-06	1.00E+00	2.00E-07	7.71E-01
3.00E-07	1.00E+00	0.00E+00	0.00E+00	3.00E-06	1.00E+00	3.00E-07	7.68E-01
5.00E-07	1.00E+00	0.00E+00	0.00E+00	5.00E-06	1.00E+00	5.00E-07	7.65E-01
7.00E-07	1.00E+00	0.00E+00	0.00E+00	7.00E-06	1.00E+00	7.00E-07	7.61E-01
1.00E-06	1.00E+00	0.00E+00	0.00E+00	1.00E-05	1.00E+00	1.00E-06	7.61E-01
2.00E-06	1.00E+00	0.00E+00	0.00E+00	2.00E-05	1.00E+00	2.00E-06	7.38E-01
3.00E-06	1.00E+00	0.00E+00	0.00E+00	3.00E-05	1.00E+00	3.00E-06	7.27E-01
5.00E-06	1.00E+00	0.00E+00	0.00E+00	5.00E-05	1.00E+00	5.00E-06	7.24E-01
7.00E-06	1.00E+00	0.00E+00	0.00E+00	7.00E-05	1.00E+00	7.00E-06	7.24E-01
1.00E-05	1.00E+00	0.00E+00	0.00E+00	1.00E-04	1.00E+00	1.00E-05	7.19E-01
2.00E-05	9.99E-01	0.00E+00	0.00E+00	2.00E-04	1.00E+00	2.00E-05	7.05E-01
3.00E-05	9.70E-01	0.00E+00	0.00E+00	3.00E-04	1.00E+00	3.00E-05	6.99E-01
5.00E-05	9.25E-01	0.00E+00	0.00E+00	5.00E-04	9.92E-01	5.00E-05	6.96E-01
7.00E-05	8.48E-01	0.00E+00	0.00E+00	7.00E-04	9.56E-01	7.00E-05	6.67E-01
1.00E-04	8.32E-01	0.00E+00	0.00E+00	1.00E-03	9.25E-01	1.00E-04	6.62E-01
2.00E-04	7.44E-01	0.00E+00	0.00E+00	2.00E-03	8.32E-01	2.00E-04	6.43E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE			2009-11222	
ANALYSIS FOR PSEG ESPA			Rev. 2	Date
Safety Related	X	Non-Safety Related	Page 1.4-682 of 1.4-801	
Client PSEG Nuclear Development		Prepared by		
Project PSEG ESPA		Reviewed by		
Proj. No 12380-001		Approved by		
Equip. No.		Date		

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 17 OF 23:
 RC502

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION

10-JAN-10 19:24:48	PAGE 98	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	5.13E+01	1.75E+01	1.43E+02	2.24E+02	3.30E+02	3.57E+02	6.62E+02	9.51E-
06										
CAN FAT/TOTAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										
EARLY dose L-EDEWBODY > 0.250 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										

POPULATION DOSE (Sv)

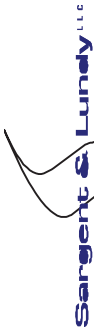


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-685 of 1.4-801

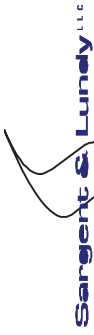
Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related								
L-EDEWBODY 05 147	TOT LIF	0-16.1 km	1.0000	9.92E+00	3.52E+00	2.64E+01	3.88E+01	7.54E+01	9.51E+01	2.24E+02	3.81E-
L-EDEWBODY 06 4	TOT LIF	0-80.5 km	1.0000	1.12E+03	3.96E+02	3.21E+03	4.93E+03	7.58E+03	8.27E+03	1.49E+04	9.51E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0-80.5 km	1.0000	6.36E-06	2.32E-06	1.82E-05	2.80E-05	4.16E-05	4.84E-05	8.14E-05	9.51E-	
CAN FAT/TOTAL	0-16.1 km	1.0000	7.56E-06	2.71E-06	1.95E-05	2.99E-05	5.63E-05	1.70E-04	3.81E-		
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 04 75	0-1.6 km	1.0000	1.90E-02	1.20E-02	3.71E-02	5.31E-02	1.67E-01	2.16E-01	3.29E-01	2.76E-	



Calcs. For ENVIRONMENTAL CONSEQUENCE				Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				Rev. 2	Date
Safety Related	X	Non-Safety Related		Page 1.4-687 of 1.4-801	
Client	PSEG Nuclear Development				
Project	PSEG ESPA				
Proj. No	12380-001	Equip. No.			

L-EDEWBODY 04 279	0-1.6 km	0.8663	1.26E-02	1.46E-03	4.25E-02	5.42E-02	7.54E-02	8.84E-02	1.06E-01	7.23E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 184	0-16.1 km	0.9146	6.48E+01	1.95E+01	1.60E+02	2.64E+02	6.54E+02	7.90E+02	1.46E+03	1.56E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 59		0.8686	6.00E+01	1.37E+01	1.54E+02	2.53E+02	6.08E+02	7.55E+02	1.42E+03	1.33E-
TOTAL INGESTION PATHWAYS DOSE 05 163		0.9146	3.79E+00	3.00E+00	9.12E+00	1.07E+01	1.34E+01	1.47E+01	2.88E+01	1.28E-
LONG-TERM GROUNDSHINE DOSE 04 59		0.8686	5.87E+01	1.32E+01	1.51E+02	2.49E+02	5.96E+02	7.47E+02	1.39E+03	1.33E-
LONG-TERM RESUSPENSION DOSE 04 59		0.8686	1.31E+00	3.03E-01	3.48E+00	5.41E+00	1.20E+01	1.50E+01	3.14E+01	1.33E-
WATER INGESTION DOSE 05 195		0.8884	2.50E-01	4.26E-02	6.80E-01	1.21E+00	3.41E+00	4.79E+00	1.80E+01	2.06E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 195		0.1547	1.03E+00	0.00E+00	1.17E+00	6.29E+00	2.13E+01	3.13E+01	1.48E+02	2.26E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 80		0.2289	3.15E-02	0.00E+00	4.37E-02	1.55E-01	7.76E-01	1.06E+00	3.45E+00	1.87E-
INGESTION OF GRAINS 05 376		0.9146	1.19E-01	4.35E-03	3.85E-01	5.61E-01	9.79E-01	1.05E+00	1.70E+00	1.33E-
INGESTION OF LEAF VEG 05 163		0.9146	1.80E-01	1.92E-02	5.83E-01	8.08E-01	1.16E+00	1.29E+00	3.10E+00	1.28E-
INGESTION OF ROOT CROPS 05 376		0.9146	1.60E-01	1.05E-02	5.29E-01	7.45E-01	1.18E+00	1.32E+00	2.32E+00	1.33E-
INGESTION OF FRUITS 05 376		0.9146	2.60E-01	3.77E-02	8.11E-01	1.11E+00	1.99E+00	2.19E+00	3.55E+00	1.33E-
INGESTION OF LEGUMES 05 376		0.9146	1.55E-01	2.29E-02	4.91E-01	6.87E-01	1.06E+00	1.13E+00	2.10E+00	1.33E-
INGESTION OF BEEF 05 279		0.9146	1.14E+00	5.87E-01	3.11E+00	3.78E+00	5.20E+00	5.43E+00	8.72E+00	3.74E-
INGESTION OF MILK 05 278		0.9146	1.03E+00	7.30E-01	2.55E+00	3.14E+00	4.18E+00	4.73E+00	8.91E+00	2.06E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No.	2009-11222		
Rev.	2	Date	
Page		1.4-688 of 1.4-801	

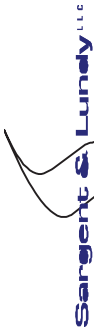
Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

INGESTION OF POULTRY 05 163	0.9146	3.11E-01	1.61E-01	8.11E-01	1.05E+00	1.49E+00	1.74E+00	3.71E+00	1.28E-
INGESTION OF OTHER MEAT CROPS 05 183	0.9146	1.86E-01	9.45E-02	5.30E-01	7.80E-01	1.13E+00	1.22E+00	2.17E+00	4.92E-
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km									
TOTAL LONG-TERM PATHWAYS DOSE 04 30	1.0000	4.46E+03	1.60E+03	1.23E+04	1.84E+04	3.06E+04	3.73E+04	6.84E+04	1.57E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 30	1.0000	4.37E+03	1.49E+03	1.22E+04	1.83E+04	3.06E+04	3.73E+04	6.83E+04	1.57E-
TOTAL INGESTION PATHWAYS DOSE 04 386	1.0000	8.96E+01	6.60E+01	2.04E+02	2.50E+02	3.51E+02	3.91E+02	5.36E+02	3.33E-
LONG-TERM GROUNDSHINE DOSE 04 30	1.0000	4.27E+03	1.46E+03	1.19E+04	1.73E+04	2.98E+04	3.64E+04	6.68E+04	1.57E-
LONG-TERM RESUSPENSION DOSE 04 30	1.0000	9.78E+01	3.43E+01	2.85E+02	3.96E+02	6.82E+02	8.38E+02	1.53E+03	1.57E-
WATER INGESTION DOSE 05 236	1.0000	2.66E+00	1.19E+00	7.10E+00	1.07E+01	1.90E+01	2.27E+01	3.51E+01	1.03E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

MILK DISPOSAL AREA (HECTARES)	0.6153	1.69E+04	3.86E+03	5.27E+04	6.94E+04	9.58E+04	1.08E+05	1.70E+05	3.42E-04
CROP DISPOSAL AREA (HECTARES)	0.7531	2.30E+04	1.27E+04	6.10E+04	7.85E+04	1.17E+05	1.35E+05	2.16E+05	3.42E-04



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-692 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

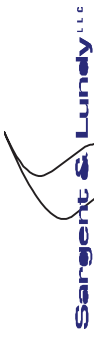
MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 102

SOURCE TERM 17 OF 23:
RC502

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	0.00E+00	1.00E-07	1.00E-08
2.00E-08	0.00E+00	2.00E-07	2.00E-08
3.00E-08	0.00E+00	3.00E-07	3.00E-08
5.00E-08	0.00E+00	5.00E-07	5.00E-08
7.00E-08	0.00E+00	7.00E-07	7.00E-08
1.00E-07	0.00E+00	1.00E-06	1.00E-07
2.00E-07	0.00E+00	2.00E-06	2.00E-07
3.00E-07	0.00E+00	3.00E-06	3.00E-07
5.00E-07	0.00E+00	5.00E-06	5.00E-07
7.00E-07	0.00E+00	7.00E-06	7.00E-07
1.00E-06	0.00E+00	1.00E-05	1.00E-06
2.00E-06	0.00E+00	2.00E-05	2.00E-06
3.00E-06	0.00E+00	3.00E-05	3.00E-06
5.00E-06	0.00E+00	5.00E-05	5.00E-06
7.00E-06	0.00E+00	7.00E-05	7.00E-06
1.00E-05	0.00E+00	1.00E-04	1.00E-05
2.00E-05	0.00E+00	2.00E-04	2.00E-05
3.00E-05	0.00E+00	3.00E-04	3.00E-05
5.00E-05	0.00E+00	5.00E-04	5.00E-05
7.00E-05	0.00E+00	7.00E-04	7.00E-05
1.00E-04	0.00E+00	1.00E-03	1.00E-04
2.00E-04	0.00E+00	2.00E-03	2.00E-04
3.00E-04	0.00E+00	3.00E-03	3.00E-04
5.00E-04	0.00E+00	5.00E-03	5.00E-04
7.00E-04	0.00E+00	7.00E-03	7.00E-04
1.00E-03	0.00E+00	1.00E-02	1.00E-03
2.00E-03	0.00E+00	2.00E-02	2.00E-03
3.00E-03	0.00E+00	3.00E-02	3.00E-03
5.00E-03	0.00E+00	5.00E-02	5.00E-03
7.00E-03	0.00E+00	7.00E-02	7.00E-03
1.00E-02	0.00E+00	1.00E-01	1.00E-02
2.00E-02	0.00E+00	2.00E-01	2.00E-02
3.00E-02	0.00E+00	3.00E-01	3.00E-02
5.00E-02	0.00E+00	5.00E-01	5.00E-02
7.00E-02	0.00E+00	7.00E-01	7.00E-02
1.00E-01	0.00E+00	1.00E+00	1.00E-01
2.00E-01	0.00E+00	2.00E+00	2.00E-01
3.00E-01	0.00E+00	3.00E+00	3.00E-01
5.00E-01	0.00E+00	5.00E+00	5.00E-01
7.00E-01	0.00E+00	7.00E+00	7.00E-01
1.00E+00	0.00E+00	1.00E+00	1.00E+00
2.00E+00	0.00E+00	2.00E+00	2.00E+00
3.00E+00	0.00E+00	3.00E+00	3.00E+00
5.00E+00	0.00E+00	5.00E+00	5.00E+00
7.00E+00	0.00E+00	7.00E+00	7.00E+00
1.00E+01	0.00E+00	1.00E+01	1.00E+01
2.00E+01	0.00E+00	2.00E+01	2.00E+01
3.00E+01	0.00E+00	3.00E+01	3.00E+01
5.00E+01	0.00E+00	5.00E+01	5.00E+01
7.00E+01	0.00E+00	7.00E+01	7.00E+01
1.00E+02	0.00E+00	1.00E+02	1.00E+02
2.00E+02	0.00E+00	2.00E+02	2.00E+02
3.00E+02	0.00E+00	3.00E+02	3.00E+02
5.00E+02	0.00E+00	5.00E+02	5.00E+02
7.00E+02	0.00E+00	7.00E+02	7.00E+02
1.00E+03	0.00E+00	1.00E+03	1.00E+03
2.00E+03	0.00E+00	2.00E+03	2.00E+03
3.00E+03	0.00E+00	3.00E+03	3.00E+03
5.00E+03	0.00E+00	5.00E+03	5.00E+03
7.00E+03	0.00E+00	7.00E+03	7.00E+03
1.00E+04	0.00E+00	1.00E+04	1.00E+04
2.00E+04	0.00E+00	2.00E+04	2.00E+04
3.00E+04	0.00E+00	3.00E+04	3.00E+04
5.00E+04	0.00E+00	5.00E+04	5.00E+04
7.00E+04	0.00E+00	7.00E+04	7.00E+04
1.00E+05	0.00E+00	1.00E+05	1.00E+05
2.00E+05	0.00E+00	2.00E+05	2.00E+05
3.00E+05	0.00E+00	3.00E+05	3.00E+05
5.00E+05	0.00E+00	5.00E+05	5.00E+05
7.00E+05	0.00E+00	7.00E+05	7.00E+05
1.00E+06	0.00E+00	1.00E+06	1.00E+06
2.00E+06	0.00E+00	2.00E+06	2.00E+06
3.00E+06	0.00E+00	3.00E+06	3.00E+06
5.00E+06	0.00E+00	5.00E+06	5.00E+06
7.00E+06	0.00E+00	7.00E+06	7.00E+06
1.00E+07	0.00E+00	1.00E+07	1.00E+07
2.00E+07	0.00E+00	2.00E+07	2.00E+07
3.00E+07	0.00E+00	3.00E+07	3.00E+07
5.00E+07	0.00E+00	5.00E+07	5.00E+07
7.00E+07	0.00E+00	7.00E+07	7.00E+07
1.00E+08	0.00E+00	1.00E+08	1.00E+08
2.00E+08	0.00E+00	2.00E+08	2.00E+08
3.00E+08	0.00E+00	3.00E+08	3.00E+08
5.00E+08	0.00E+00	5.00E+08	5.00E+08
7.00E+08	0.00E+00	7.00E+08	7.00E+08
1.00E+09	0.00E+00	1.00E+09	1.00E+09
2.00E+09	0.00E+00	2.00E+09	2.00E+09
3.00E+09	0.00E+00	3.00E+09	3.00E+09
5.00E+09	0.00E+00	5.00E+09	5.00E+09
7.00E+09	0.00E+00	7.00E+09	7.00E+09
1.00E+10	0.00E+00	1.00E+10	1.00E+10
2.00E+10	0.00E+00	2.00E+10	2.00E+10
3.00E+10	0.00E+00	3.00E+10	3.00E+10
5.00E+10	0.00E+00	5.00E+10	5.00E+10
7.00E+10	0.00E+00	7.00E+10	7.00E+10
1.00E+11	0.00E+00	1.00E+11	1.00E+11
2.00E+11	0.00E+00	2.00E+11	2.00E+11
3.00E+11	0.00E+00	3.00E+11	3.00E+11
5.00E+11	0.00E+00	5.00E+11	5.00E+11
7.00E+11	0.00E+00	7.00E+11	7.00E+11
1.00E+12	0.00E+00	1.00E+12	1.00E+12
2.00E+12	0.00E+00	2.00E+12	2.00E+12
3.00E+12	0.00E+00	3.00E+12	3.00E+12
5.00E+12	0.00E+00	5.00E+12	5.00E+12
7.00E+12	0.00E+00	7.00E+12	7.00E+12



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA			Rev.	2
			Date	
Safety Related		X	Non-Safety Related	
Page		1.4-703 of 1.4-801		

Client	PSEG Nuclear Development		Prepared by		Date	
Project	PSEG ESPA		Reviewed by		Date	
Proj. No	12380-001		Approved by		Date	

L-EDEWBODY	TOT LIF	0-16.1 km	1.0000	1.19E+00	3.31E-01	2.93E+00	5.17E+00	1.25E+01	1.65E+01	5.71E+01	2.26E-
05	195										
L-EDEWBODY	TOT LIF	0-80.5 km	1.0000	6.11E+01	2.74E+01	1.65E+02	2.32E+02	3.68E+02	4.35E+02	9.12E+02	2.00E-
04	249										

POPULATION WEIGHTED RISK

ERL FAT/TOTAL	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0	0-80.5 km	1.0000	3.65E-07	1.56E-07	1.04E-06	1.34E-06	2.24E-06	2.61E-06	5.67E-06	2.00E-
04	249										
CAN FAT/TOTAL	0	0-16.1 km	1.0000	8.84E-07	2.31E-07	2.15E-06	3.86E-06	9.71E-06	1.26E-05	4.53E-05	2.26E-
05	195										

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY	0-1.6 km	1.0000	2.17E-03	1.23E-03	6.34E-03	7.97E-03	8.32E-03	9.90E-03	2.85E-
04	374								



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page		1.4-704 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

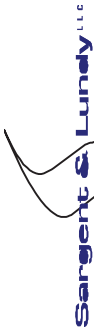
SOURCE TERM 18 OF 23:
 RC503

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10	19:24:48	PAGE 106	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PEAK	PEAK
QUANTILES													
TRIAL													
HEALTH EFFECTS CASES													
CAN FAT/TOTAL	0-80.5 km	1.0000	2.64E+01	9.36E+00	6.92E+01	1.05E+02	2.51E+02	3.18E+02	6.03E+02	4.85E-			
04 85													
CAN FAT/TOTAL	0-16.1 km	0.8606	6.52E-01	2.99E-03	1.58E+00	3.91E+00	1.07E+01	1.42E+01	4.78E+01	1.56E-			
05 75													
POPULATION DOSE (Sv)													
L-EDEWBODY TOT LIF	0-16.1 km	0.8606	1.46E+01	7.09E-02	3.50E+01	8.69E+01	2.44E+02	3.20E+02	1.07E+03	1.56E-			
05 75													
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	5.93E+02	2.09E+02	1.50E+03	2.44E+03	5.53E+03	7.04E+03	1.35E+04	4.85E-			
04 85													
POPULATION WEIGHTED RISK													
CAN FAT/TOTAL	0-80.5 km	1.0000	3.05E-06	9.01E-07	8.19E-06	1.30E-05	3.10E-05	3.99E-05	7.37E-05	4.85E-			
04 85													
CAN FAT/TOTAL	0-16.1 km	0.8510	9.76E-06	2.02E-08	2.14E-05	5.95E-05	1.71E-04	2.39E-04	7.81E-04	1.56E-			
05 75													

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.4-705 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 279	0-1.6 km	0.6861	6.41E-03	0.00E+00	3.07E-02	3.54E-02	4.96E-02	5.17E-02	5.70E-02	7.23E-
L-EDEWBODY POP. DOSE (Sv)	0-16.1 km									
TOTAL LONG-TERM PATHWAYS DOSE 05 75	0.8606	1.46E+01	7.09E-02	3.50E+01	8.69E+01	2.44E+02	3.20E+02	1.07E+03	1.56E-	
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 75	0.8510	1.33E+01	2.66E-02	2.93E+01	8.12E+01	2.36E+02	3.16E+02	1.06E+03	1.56E-	
TOTAL INGESTION PATHWAYS DOSE 04 360	0.8606	1.23E+00	1.51E-02	5.00E+00	7.36E+00	1.18E+01	1.38E+01	2.08E+01	1.78E-	
LONG-TERM GROUNDSHINE DOSE 05 75	0.8510	1.23E+01	2.43E-02	2.71E+01	7.35E+01	2.16E+02	2.90E+02	9.80E+02	1.56E-	
LONG-TERM RESUSPENSION DOSE 05 75	0.8510	1.05E+00	2.10E-03	2.34E+00	6.43E+00	1.91E+01	2.58E+01	8.43E+01	1.56E-	
WATER INGESTION DOSE 05 195	0.8485	3.53E-02	5.84E-05	8.84E-02	2.01E-01	6.27E-01	8.93E-01	3.30E+00	2.06E-	
POP.-DEPENDENT DECONTAMINATION DOSE 05 195	0.0402	1.22E-02	0.00E+00	0.00E+00	0.00E+00	1.63E-01	3.65E-01	1.37E+01	2.26E-	
FARM-DEPENDENT DECONTAMINATION DOSE 05 80	0.1478	8.97E-04	0.00E+00	7.38E-05	1.88E-03	2.16E-02	3.53E-02	2.23E-01	1.87E-	
INGESTION OF GRAINS 04 59	0.8606	5.83E-02	3.80E-05	2.06E-01	4.19E-01	9.08E-01	1.14E+00	1.90E+00	7.52E-	
INGESTION OF LEAF VEG 05 162	0.8606	9.76E-02	2.18E-04	3.39E-01	7.32E-01	1.29E+00	1.56E+00	2.94E+00	1.13E-	
INGESTION OF ROOT CROPS 04 59	0.8606	8.11E-02	1.21E-04	2.69E-01	5.91E-01	1.18E+00	1.53E+00	2.56E+00	7.52E-	
INGESTION OF FRUITS 04 59	0.8606	1.18E-01	1.90E-04	3.82E-01	8.46E-01	1.82E+00	2.33E+00	3.72E+00	7.52E-	
INGESTION OF LEGUMES 04 59	0.8606	7.63E-02	2.30E-04	2.54E-01	5.18E-01	1.09E+00	1.38E+00	2.32E+00	7.52E-	
INGESTION OF BEEF 04 360	0.8606	3.27E-01	5.65E-03	1.16E+00	1.96E+00	3.34E+00	3.86E+00	6.53E+00	1.78E-	
INGESTION OF MILK 05 303	0.8606	2.66E-01	5.39E-03	9.21E-01	1.51E+00	2.78E+00	3.10E+00	5.16E+00	1.28E-	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-706 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

INGESTION OF POULTRY 04 59	0.8606	1.35E-01	1.30E-03	5.32E-01	8.69E-01	1.51E+00	1.86E+00	2.95E+00	7.52E-
INGESTION OF OTHER MEAT CROPS 05 196	0.8606	3.82E-02	6.82E-04	1.25E-01	2.03E-01	4.19E-01	5.37E-01	1.24E+00	3.74E-
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km									
TOTAL LONG-TERM PATHWAYS DOSE 04 85	1.0000	5.93E+02	2.09E+02	1.50E+03	2.44E+03	5.53E+03	7.04E+03	1.35E+04	4.85E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 85	1.0000	5.55E+02	1.60E+02	1.43E+03	2.35E+03	5.47E+03	7.03E+03	1.34E+04	4.85E-
TOTAL INGESTION PATHWAYS DOSE 04 59	1.0000	3.78E+01	1.41E+01	1.06E+02	1.32E+02	2.12E+02	2.44E+02	4.04E+02	3.42E-
LONG-TERM GROUNDSHINE DOSE 04 85	1.0000	5.11E+02	1.43E+02	1.31E+03	2.13E+03	5.18E+03	6.62E+03	1.24E+04	4.85E-
LONG-TERM RESUSPENSION DOSE 04 85	1.0000	4.40E+01	1.22E+01	1.17E+02	1.85E+02	4.33E+02	5.66E+02	1.06E+03	4.85E-
WATER INGESTION DOSE 05 236	1.0000	3.54E-01	1.27E-01	9.34E-01	1.40E+00	3.09E+00	3.92E+00	6.57E+00	1.03E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-710 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

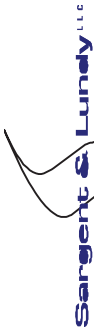
MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 108

SOURCE TERM 18 OF 23:
RC503

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km
L-EDEWBODY

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	0.00E+00	1.00E-09	1.00E-08
2.00E-08	0.00E+00	2.00E-09	2.00E-08
3.00E-08	0.00E+00	3.00E-09	3.00E-08
5.00E-08	0.00E+00	5.00E-09	5.00E-08
7.00E-08	0.00E+00	7.00E-09	7.00E-08
1.00E-07	0.00E+00	1.00E-08	1.00E-07
2.00E-07	0.00E+00	2.00E-08	2.00E-07
3.00E-07	0.00E+00	3.00E-08	3.00E-07
5.00E-07	0.00E+00	5.00E-08	5.00E-07
7.00E-07	0.00E+00	7.00E-08	7.00E-07
1.00E-06	0.00E+00	1.00E-07	1.00E-06
2.00E-06	0.00E+00	2.00E-07	2.00E-06
3.00E-06	0.00E+00	3.00E-07	3.00E-06
5.00E-06	0.00E+00	5.00E-07	5.00E-06
7.00E-06	0.00E+00	7.00E-07	7.00E-06
1.00E-05	0.00E+00	1.00E-06	1.00E-05
2.00E-05	0.00E+00	2.00E-06	2.00E-05
3.00E-05	0.00E+00	3.00E-06	3.00E-05
5.00E-05	0.00E+00	5.00E-06	5.00E-05
7.00E-05	0.00E+00	7.00E-06	7.00E-05
1.00E-04	0.00E+00	1.00E-05	1.00E-04
2.00E-04	0.00E+00	2.00E-05	2.00E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-721 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related										
L-EDEWBODY 05 195	TOT LIF	0-16.1 km	1.0000	1.19E+00	3.31E-01	2.93E+00	5.17E+00	1.25E+01	1.65E+01	5.71E+01	2.26E-
L-EDEWBODY 04 249	TOT LIF	0-80.5 km	1.0000	6.11E+01	2.74E+01	1.65E+02	2.32E+02	3.68E+02	4.35E+02	9.12E+02	2.00E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0	0-80.5 km	1.0000	3.65E-07	1.56E-07	1.04E-06	1.34E-06	2.24E-06	2.61E-06	5.67E-06	2.00E-
CAN FAT/TOTAL	0	0-16.1 km	1.0000	8.84E-07	2.31E-07	2.15E-06	3.86E-06	9.71E-06	1.26E-05	4.53E-05	2.26E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY	0	0-1.6 km	1.0000	2.17E-03	1.23E-03	6.34E-03	7.23E-03	7.97E-03	8.32E-03	9.90E-03	2.85E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-722 of 1.4-801		

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

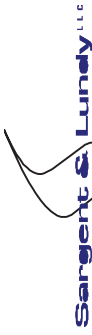
SOURCE TERM 19 OF 23:
 RC504

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 19:24:48	PAGE 112	PROB	QUANTILES					PEAK	PEAK	
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH		
TRIAL										
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	2.64E+01	9.36E+00	6.92E+01	1.05E+02	2.51E+02	3.18E+02	6.03E+02	4.85E-
04 85										
CAN FAT/TOTAL	0-16.1 km	0.8606	6.52E-01	2.99E-03	1.58E+00	3.91E+00	1.07E+01	1.42E+01	4.78E+01	1.56E-
05 75										
POPULATION DOSE (Sv)										
L-EDEWBODY TOT LIF	0-16.1 km	0.8606	1.46E+01	7.09E-02	3.50E+01	8.69E+01	2.44E+02	3.20E+02	1.07E+03	1.56E-
05 75										
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	5.93E+02	2.09E+02	1.50E+03	2.44E+03	5.53E+03	7.04E+03	1.35E+04	4.85E-
04 85										
POPULATION WEIGHTED RISK										
CAN FAT/TOTAL	0-80.5 km	1.0000	3.05E-06	9.01E-07	8.19E-06	1.30E-05	3.10E-05	3.99E-05	7.37E-05	4.85E-
04 85										
CAN FAT/TOTAL	0-16.1 km	0.8510	9.76E-06	2.02E-08	2.14E-05	5.95E-05	1.71E-04	2.39E-04	7.81E-04	1.56E-
05 75										

PEAK DOSE FOUND ON SPATIAL GRID (SV)



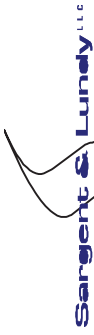
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.4-723 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 279	0-1.6 km	0.6861	6.41E-03	0.00E+00	3.07E-02	3.54E-02	4.96E-02	5.17E-02	5.70E-02	7.23E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 75	0-16.1 km	0.8606	1.46E+01	7.09E-02	3.50E+01	8.69E+01	2.44E+02	3.20E+02	1.07E+03	1.56E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 75		0.8510	1.33E+01	2.66E-02	2.93E+01	8.12E+01	2.36E+02	3.16E+02	1.06E+03	1.56E-
TOTAL INGESTION PATHWAYS DOSE 04 360		0.8606	1.23E+00	1.51E-02	5.00E+00	7.36E+00	1.18E+01	1.38E+01	2.08E+01	1.78E-
LONG-TERM GROUNDSHINE DOSE 05 75		0.8510	1.23E+01	2.43E-02	2.71E+01	7.35E+01	2.16E+02	2.90E+02	9.80E+02	1.56E-
LONG-TERM RESUSPENSION DOSE 05 75		0.8510	1.05E+00	2.10E-03	2.34E+00	6.43E+00	1.91E+01	2.58E+01	8.43E+01	1.56E-
WATER INGESTION DOSE 05 195		0.8485	3.53E-02	5.84E-05	8.84E-02	2.01E-01	6.27E-01	8.93E-01	3.30E+00	2.06E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 195		0.0402	1.22E-02	0.00E+00	0.00E+00	0.00E+00	1.63E-01	3.65E-01	1.37E+01	2.26E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 80		0.1478	8.97E-04	0.00E+00	7.38E-05	1.88E-03	2.16E-02	3.53E-02	2.23E-01	1.87E-
INGESTION OF GRAINS 04 59		0.8606	5.83E-02	3.80E-05	2.06E-01	4.19E-01	9.08E-01	1.14E+00	1.90E+00	7.52E-
INGESTION OF LEAF VEG 05 162		0.8606	9.76E-02	2.18E-04	3.39E-01	7.32E-01	1.29E+00	1.56E+00	2.94E+00	1.13E-
INGESTION OF ROOT CROPS 04 59		0.8606	8.11E-02	1.21E-04	2.69E-01	5.91E-01	1.18E+00	1.53E+00	2.56E+00	7.52E-
INGESTION OF FRUITS 04 59		0.8606	1.18E-01	1.90E-04	3.82E-01	8.46E-01	1.82E+00	2.33E+00	3.72E+00	7.52E-
INGESTION OF LEGUMES 04 59		0.8606	7.63E-02	2.30E-04	2.54E-01	5.18E-01	1.09E+00	1.38E+00	2.32E+00	7.52E-
INGESTION OF BEEF 04 360		0.8606	3.27E-01	5.65E-03	1.16E+00	1.96E+00	3.34E+00	3.86E+00	6.53E+00	1.78E-
INGESTION OF MILK 05 303		0.8606	2.66E-01	5.39E-03	9.21E-01	1.51E+00	2.78E+00	3.10E+00	5.16E+00	1.28E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-724 of 1.4-801

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

INGESTION OF POULTRY 04 59	0.8606	1.35E-01	1.30E-03	5.32E-01	8.69E-01	1.51E+00	1.86E+00	2.95E+00	7.52E-
INGESTION OF OTHER MEAT CROPS 05 196	0.8606	3.82E-02	6.82E-04	1.25E-01	2.03E-01	4.19E-01	5.37E-01	1.24E+00	3.74E-
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km									
TOTAL LONG-TERM PATHWAYS DOSE 04 85	1.0000	5.93E+02	2.09E+02	1.50E+03	2.44E+03	5.53E+03	7.04E+03	1.35E+04	4.85E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 85	1.0000	5.55E+02	1.60E+02	1.43E+03	2.35E+03	5.47E+03	7.03E+03	1.34E+04	4.85E-
TOTAL INGESTION PATHWAYS DOSE 04 59	1.0000	3.78E+01	1.41E+01	1.06E+02	1.32E+02	2.12E+02	2.44E+02	4.04E+02	3.42E-
LONG-TERM GROUNDSHINE DOSE 04 85	1.0000	5.11E+02	1.43E+02	1.31E+03	2.13E+03	5.18E+03	6.62E+03	1.24E+04	4.85E-
LONG-TERM RESUSPENSION DOSE 04 85	1.0000	4.40E+01	1.22E+01	1.17E+02	1.85E+02	4.33E+02	5.66E+02	1.06E+03	4.85E-
WATER INGESTION DOSE 05 236	1.0000	3.54E-01	1.27E-01	9.34E-01	1.40E+00	3.09E+00	3.92E+00	6.57E+00	1.03E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page 1.4-728 of 1.4-801	
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 114

SOURCE TERM 19 OF 23:
RC504

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	1.00E+00	1.00E-09	1.00E-08
2.00E-08	1.00E+00	2.00E-09	2.00E-08
3.00E-08	1.00E+00	3.00E-09	3.00E-08
5.00E-08	1.00E+00	5.00E-09	5.00E-08
7.00E-08	1.00E+00	7.00E-09	7.00E-08
1.00E-07	1.00E+00	1.00E-08	1.00E-07
2.00E-07	1.00E+00	2.00E-08	2.00E-07
3.00E-07	1.00E+00	3.00E-08	3.00E-07
5.00E-07	1.00E+00	5.00E-08	5.00E-07
7.00E-07	1.00E+00	7.00E-08	7.00E-07
1.00E-06	1.00E+00	1.00E-07	1.00E-06
2.00E-06	1.00E+00	2.00E-07	2.00E-06
3.00E-06	1.00E+00	3.00E-07	3.00E-06
5.00E-06	1.00E+00	5.00E-07	5.00E-06
7.00E-06	1.00E+00	7.00E-07	7.00E-06
1.00E-05	1.00E+00	1.00E-06	1.00E-05
2.00E-05	1.00E+00	2.00E-06	2.00E-05
3.00E-05	1.00E+00	3.00E-06	3.00E-05
5.00E-05	1.00E+00	5.00E-06	5.00E-05
7.00E-05	1.00E+00	7.00E-06	7.00E-05
1.00E-04	1.00E+00	1.00E-05	1.00E-04
2.00E-04	1.00E+00	2.00E-05	2.00E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			Rev. 2	Date
Safety Related	X	Non-Safety Related	Page 1.4-736 of 1.4-801	
Client PSEG Nuclear Development		Prepared by		
Project PSEG ESPA		Reviewed by		
Proj. No 12380-001		Approved by		
Equip. No.		Date		

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 20 OF 23:
 RC602

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

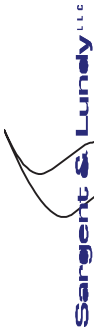
COHORT 1 = 95% EVACUATION

10-JAN-10 19:24:48	PAGE 116	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	5.13E+01	1.75E+01	1.43E+02	2.24E+02	3.30E+02	3.57E+02	6.62E+02	9.51E-
06										
CAN FAT/TOTAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										
EARLY dose L-EDEWBODY > 0.250 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										

POPULATION DOSE (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-739 of 1.4-801

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related								
L-EDEWBODY 05 147	TOT LIF	0-16.1 km	1.0000	9.92E+00	3.52E+00	2.64E+01	3.88E+01	7.54E+01	9.51E+01	2.24E+02	3.81E-
L-EDEWBODY 06 4	TOT LIF	0-80.5 km	1.0000	1.12E+03	3.96E+02	3.21E+03	4.93E+03	7.58E+03	8.27E+03	1.49E+04	9.51E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0-80.5 km	1.0000	6.36E-06	2.32E-06	1.82E-06	2.80E-05	4.84E-05	8.14E-05	9.51E-	9.51E-	9.51E-
CAN FAT/TOTAL	0-16.1 km	1.0000	7.56E-06	2.71E-06	1.95E-06	2.99E-05	5.63E-05	1.70E-04	3.81E-	3.81E-	3.81E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 04 75	0-1.6 km	1.0000	1.90E-02	1.20E-02	3.71E-02	5.31E-02	1.67E-01	3.29E-01	2.76E-	2.76E-	2.76E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-740 of 1.4-801		

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

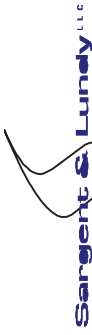
SOURCE TERM 20 OF 23:
 RC602

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

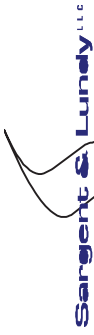
10-JAN-10 19:24:48	PAGE 118	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.98E+02	7.52E+01	5.64E+02	7.98E+02	1.37E+03	1.68E+03	1.68E+03	3.03E+03	1.57E-
04 30											
CAN FAT/TOTAL	0-16.1 km	0.9146	2.89E+00	8.65E-01	7.52E+00	1.15E+01	2.92E+01	3.44E+01	3.44E+01	6.46E+01	1.56E-
05 184											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	0.9146	6.48E+01	1.95E+01	1.60E+02	2.64E+02	6.54E+02	7.90E+02	7.90E+02	1.46E+03	1.56E-
05 184											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	4.46E+03	1.60E+03	1.23E+04	1.84E+04	3.06E+04	3.73E+04	3.73E+04	6.84E+04	1.57E-
04 30											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	2.38E-05	8.33E-06	6.92E-05	9.97E-05	1.68E-04	2.06E-04	2.06E-04	3.72E-04	1.57E-
04 30											
CAN FAT/TOTAL	0-16.1 km	0.8686	4.36E-05	1.00E-05	1.16E-04	1.82E-04	4.44E-04	5.51E-04	5.51E-04	1.03E-03	1.33E-
04 59											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related	Rev. 2	Date
		Page 1.4-741 of 1.4-801		
Client	PSEG Nuclear Development			
Project	PSEG ESPA			
Proj. No	12380-001	Equip. No.		

L-EDEWBODY 04 279	0-1.6 km	0.8663	1.26E-02	1.46E-03	4.25E-02	5.42E-02	7.54E-02	8.84E-02	1.06E-01	7.23E-
L-EDEWBODY POP. DOSE (Sv)	0-16.1 km									
TOTAL LONG-TERM PATHWAYS DOSE 05 184		0.9146	6.48E+01	1.95E+01	1.60E+02	2.64E+02	6.54E+02	7.90E+02	1.46E+03	1.56E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 59		0.8686	6.00E+01	1.37E+01	1.54E+02	2.53E+02	6.08E+02	7.55E+02	1.42E+03	1.33E-
TOTAL INGESTION PATHWAYS DOSE 05 163		0.9146	3.79E+00	3.00E+00	9.12E+00	1.07E+01	1.34E+01	1.47E+01	2.88E+01	1.28E-
LONG-TERM GROUNDSHINE DOSE 04 59		0.8686	5.87E+01	1.32E+01	1.51E+02	2.49E+02	5.96E+02	7.47E+02	1.39E+03	1.33E-
LONG-TERM RESUSPENSION DOSE 04 59		0.8686	1.31E+00	3.03E-01	3.48E+00	5.41E+00	1.20E+01	1.50E+01	3.14E+01	1.33E-
WATER INGESTION DOSE 05 195		0.8884	2.50E-01	4.26E-02	6.80E-01	1.21E+00	3.41E+00	4.79E+00	1.80E+01	2.06E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 195		0.1547	1.03E+00	0.00E+00	1.17E+00	6.29E+00	2.13E+01	3.13E+01	1.48E+02	2.26E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 80		0.2289	3.15E-02	0.00E+00	4.37E-02	1.55E-01	7.76E-01	1.06E+00	3.45E+00	1.87E-
INGESTION OF GRAINS 05 376		0.9146	1.19E-01	4.35E-03	3.85E-01	5.61E-01	9.79E-01	1.05E+00	1.70E+00	1.33E-
INGESTION OF LEAF VEG 05 163		0.9146	1.80E-01	1.92E-02	5.83E-01	8.08E-01	1.16E+00	1.29E+00	3.10E+00	1.28E-
INGESTION OF ROOT CROPS 05 376		0.9146	1.60E-01	1.05E-02	5.29E-01	7.45E-01	1.18E+00	1.32E+00	2.32E+00	1.33E-
INGESTION OF FRUITS 05 376		0.9146	2.60E-01	3.77E-02	8.11E-01	1.11E+00	1.99E+00	2.19E+00	3.55E+00	1.33E-
INGESTION OF LEGUMES 05 376		0.9146	1.55E-01	2.29E-02	4.91E-01	6.87E-01	1.06E+00	1.13E+00	2.10E+00	1.33E-
INGESTION OF BEEF 05 279		0.9146	1.14E+00	5.87E-01	3.11E+00	3.78E+00	5.20E+00	5.43E+00	8.72E+00	3.74E-
INGESTION OF MILK 05 278		0.9146	1.03E+00	7.30E-01	2.55E+00	3.14E+00	4.18E+00	4.73E+00	8.91E+00	2.06E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.4-742 of 1.4-801		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 05 163	0.9146	3.11E-01	1.61E-01	8.11E-01	1.05E+00	1.49E+00	1.74E+00	3.71E+00	1.28E-
INGESTION OF OTHER MEAT CROPS 05 183	0.9146	1.86E-01	9.45E-02	5.30E-01	7.80E-01	1.13E+00	1.22E+00	2.17E+00	4.92E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 30	1.0000	4.46E+03	1.60E+03	1.23E+04	1.84E+04	3.06E+04	3.73E+04	6.84E+04	1.57E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 30	1.0000	4.37E+03	1.49E+03	1.22E+04	1.83E+04	3.06E+04	3.73E+04	6.83E+04	1.57E-
TOTAL INGESTION PATHWAYS DOSE 04 386	1.0000	8.96E+01	6.60E+01	2.04E+02	2.50E+02	3.51E+02	3.91E+02	5.36E+02	3.33E-
LONG-TERM GROUNDSHINE DOSE 04 30	1.0000	4.27E+03	1.46E+03	1.19E+04	1.73E+04	2.98E+04	3.64E+04	6.68E+04	1.57E-
LONG-TERM RESUSPENSION DOSE 04 30	1.0000	9.78E+01	3.43E+01	2.85E+02	3.96E+02	6.82E+02	8.38E+02	1.53E+03	1.57E-
WATER INGESTION DOSE 05 236	1.0000	2.66E+00	1.19E+00	7.10E+00	1.07E+01	1.90E+01	2.27E+01	3.51E+01	1.03E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

MILK DISPOSAL AREA (HECTARES)	0.6153	1.69E+04	3.86E+03	5.27E+04	6.94E+04	9.58E+04	1.08E+05	1.70E+05	3.42E-04
CROP DISPOSAL AREA (HECTARES)	0.7531	2.30E+04	1.27E+04	6.10E+04	7.85E+04	1.17E+05	1.35E+05	2.16E+05	3.42E-04



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-746 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 120

SOURCE TERM 20 OF 23:
RC602

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	0.00E+00	1.00E-07	1.00E-08
2.00E-08	0.00E+00	2.00E-07	2.00E-08
3.00E-08	0.00E+00	3.00E-07	3.00E-08
5.00E-08	0.00E+00	5.00E-07	5.00E-08
7.00E-08	0.00E+00	7.00E-07	7.00E-08
1.00E-07	0.00E+00	1.00E-06	1.00E-07
2.00E-07	0.00E+00	2.00E-06	2.00E-07
3.00E-07	0.00E+00	3.00E-06	3.00E-07
5.00E-07	0.00E+00	5.00E-06	5.00E-07
7.00E-07	0.00E+00	7.00E-06	7.00E-07
1.00E-06	0.00E+00	1.00E-05	1.00E-06
2.00E-06	0.00E+00	2.00E-05	2.00E-06
3.00E-06	0.00E+00	3.00E-05	3.00E-06
5.00E-06	0.00E+00	5.00E-05	5.00E-06
7.00E-06	0.00E+00	7.00E-05	7.00E-06
1.00E-05	0.00E+00	1.00E-04	1.00E-05
2.00E-05	0.00E+00	2.00E-04	2.00E-05
3.00E-05	0.00E+00	3.00E-04	3.00E-05
5.00E-05	0.00E+00	5.00E-04	5.00E-05
7.00E-05	0.00E+00	7.00E-04	7.00E-05
1.00E-04	0.00E+00	1.00E-03	1.00E-04
2.00E-04	0.00E+00	2.00E-03	2.00E-04
3.00E-04	0.00E+00	3.00E-03	3.00E-04
5.00E-04	0.00E+00	5.00E-03	5.00E-04
7.00E-04	0.00E+00	7.00E-03	7.00E-04
1.00E-03	0.00E+00	1.00E-02	1.00E-03
2.00E-03	0.00E+00	2.00E-02	2.00E-03
3.00E-03	0.00E+00	3.00E-02	3.00E-03
5.00E-03	0.00E+00	5.00E-02	5.00E-03
7.00E-03	0.00E+00	7.00E-02	7.00E-03
1.00E-02	0.00E+00	1.00E-01	1.00E-02
2.00E-02	0.00E+00	2.00E-01	2.00E-02
3.00E-02	0.00E+00	3.00E-01	3.00E-02
5.00E-02	0.00E+00	5.00E-01	5.00E-02
7.00E-02	0.00E+00	7.00E-01	7.00E-02
1.00E-01	0.00E+00	1.00E+00	1.00E-01
2.00E-01	0.00E+00	2.00E+00	2.00E-01
3.00E-01	0.00E+00	3.00E+00	3.00E-01
5.00E-01	0.00E+00	5.00E+00	5.00E-01
7.00E-01	0.00E+00	7.00E+00	7.00E-01
1.00E+00	0.00E+00	1.00E+00	1.00E+00
2.00E+00	0.00E+00	2.00E+00	2.00E+00
3.00E+00	0.00E+00	3.00E+00	3.00E+00
5.00E+00	0.00E+00	5.00E+00	5.00E+00
7.00E+00	0.00E+00	7.00E+00	7.00E+00
1.00E+01	0.00E+00	1.00E+01	1.00E+01
2.00E+01	0.00E+00	2.00E+01	2.00E+01
3.00E+01	0.00E+00	3.00E+01	3.00E+01
5.00E+01	0.00E+00	5.00E+01	5.00E+01
7.00E+01	0.00E+00	7.00E+01	7.00E+01
1.00E+02	0.00E+00	1.00E+02	1.00E+02
2.00E+02	0.00E+00	2.00E+02	2.00E+02
3.00E+02	0.00E+00	3.00E+02	3.00E+02
5.00E+02	0.00E+00	5.00E+02	5.00E+02
7.00E+02	0.00E+00	7.00E+02	7.00E+02
1.00E+03	0.00E+00	1.00E+03	1.00E+03
2.00E+03	0.00E+00	2.00E+03	2.00E+03
3.00E+03	0.00E+00	3.00E+03	3.00E+03
5.00E+03	0.00E+00	5.00E+03	5.00E+03
7.00E+03	0.00E+00	7.00E+03	7.00E+03
1.00E+04	0.00E+00	1.00E+04	1.00E+04
2.00E+04	0.00E+00	2.00E+04	2.00E+04
3.00E+04	0.00E+00	3.00E+04	3.00E+04
5.00E+04	0.00E+00	5.00E+04	5.00E+04
7.00E+04	0.00E+00	7.00E+04	7.00E+04
1.00E+05	0.00E+00	1.00E+05	1.00E+05
2.00E+05	0.00E+00	2.00E+05	2.00E+05
3.00E+05	0.00E+00	3.00E+05	3.00E+05
5.00E+05	0.00E+00	5.00E+05	5.00E+05
7.00E+05	0.00E+00	7.00E+05	7.00E+05
1.00E+06	0.00E+00	1.00E+06	1.00E+06
2.00E+06	0.00E+00	2.00E+06	2.00E+06
3.00E+06	0.00E+00	3.00E+06	3.00E+06
5.00E+06	0.00E+00	5.00E+06	5.00E+06
7.00E+06	0.00E+00	7.00E+06	7.00E+06
1.00E+07	0.00E+00	1.00E+07	1.00E+07
2.00E+07	0.00E+00	2.00E+07	2.00E+07
3.00E+07	0.00E+00	3.00E+07	3.00E+07
5.00E+07	0.00E+00	5.00E+07	5.00E+07
7.00E+07	0.00E+00	7.00E+07	7.00E+07
1.00E+08	0.00E+00	1.00E+08	1.00E+08
2.00E+08	0.00E+00	2.00E+08	2.00E+08
3.00E+08	0.00E+00	3.00E+08	3.00E+08
5.00E+08	0.00E+00	5.00E+08	5.00E+08
7.00E+08	0.00E+00	7.00E+08	7.00E+08
1.00E+09	0.00E+00	1.00E+09	1.00E+09
2.00E+09	0.00E+00	2.00E+09	2.00E+09
3.00E+09	0.00E+00	3.00E+09	3.00E+09
5.00E+09	0.00E+00	5.00E+09	5.00E+09
7.00E+09	0.00E+00	7.00E+09	7.00E+09
1.00E+10	0.00E+00	1.00E+10	1.00E+10
2.00E+10	0.00E+00	2.00E+10	2.00E+10
3.00E+10	0.00E+00	3.00E+10	3.00E+10
5.00E+10	0.00E+00	5.00E+10	5.00E+10
7.00E+10	0.00E+00	7.00E+10	7.00E+10
1.00E+11	0.00E+00	1.00E+11	1.00E+11
2.00E+11	0.00E+00	2.00E+11	2.00E+11
3.00E+11	0.00E+00	3.00E+11	3.00E+11
5.00E+11	0.00E+00	5.00E+11	5.00E+11
7.00E+11	0.00E+00	7.00E+11	7.00E+11
1.00E+12	0.00E+00	1.00E+12	1.00E+12
2.00E+12	0.00E+00	2.00E+12	2.00E+12
3.00E+12	0.00E+00	3.00E+12	3.00E+12
5.00E+12	0.00E+00	5.00E+12	5.00E+12
7.00E+12	0.00E+00	7.00E+12	7.00E+12



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-755 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related						
L-EDEWBODY TOT LIF 0.00E+00	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
L-EDEWBODY TOT LIF 04 217	0-80.5 km	1.0000	5.00E+03	2.48E+03	1.27E+04	1.65E+04	2.38E+04	2.66E+04	3.84E+04 1.64E-
POPULATION WEIGHTED RISK									
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 217	0-80.5 km	1.0000	4.79E-05	2.24E-05	1.24E-04	1.66E-04	2.69E-04	3.11E-04	4.93E-04 1.64E-
CAN FAT/TOTAL 0.00E+00	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PEAK DOSE FOUND ON SPATIAL GRID (SV)									
L-EDEWBODY 04 225	0-1.6 km	0.0450	6.28E-05	0.00E+00	0.00E+00	0.00E+00	2.22E-03	2.68E-03	1.18E-02 2.76E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-757 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 210	0-16.1 km	1.0000	3.75E+02	1.39E+02	9.53E+02	1.35E+03	3.11E+03	4.02E+03	1.00E+04	1.90E-
L-EDEWBODY TOT LIF 04 217	0-80.5 km	1.0000	5.38E+03	2.83E+03	1.31E+04	1.72E+04	2.48E+04	2.80E+04	3.86E+04	1.64E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 217	0-80.5 km	1.0000	5.32E-05	2.70E-05	1.32E-04	1.80E-04	2.74E-04	3.13E-04	4.95E-04	1.64E-
CAN FAT/TOTAL 05 210	0-16.1 km	1.0000	7.12E-04	2.38E-04	1.78E-03	2.66E-03	6.20E-03	8.27E-03	2.15E-02	1.90E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 339	0-1.6 km	1.0000	5.03E+00	4.51E+00	9.55E+00	1.05E+01	1.23E+01	1.31E+01	1.69E+01	3.61E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-758 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

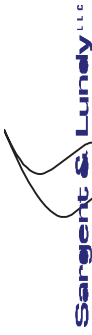
SOURCE TERM 21 OF 23:
 RC701

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10	19:24:48	PAGE 124	PROB	QUANTILES	PEAK	PEAK						
				NON-ZERO	MEAN	90TH	95TH	99TH	99.5TH	CONS	PEAK	
HEALTH EFFECTS CASES												
CAN FAT/TOTAL	04	59	0-80.5 km	1.0000	7.71E+02	3.77E+02	2.10E+03	2.71E+03	3.83E+03	4.35E+03	6.32E+03	4.85E-
CAN FAT/TOTAL	05	210	0-16.1 km	0.9997	1.75E+01	1.13E+01	3.89E+01	5.15E+01	9.30E+01	1.04E+02	1.71E+02	1.90E-
POPULATION DOSE (Sv)												
L-EDEWBODY TOT LIF	05	210	0-16.1 km	0.9997	3.93E+02	2.83E+02	9.01E+02	1.22E+03	2.23E+03	2.61E+03	4.01E+03	1.90E-
L-EDEWBODY TOT LIF	04	59	0-80.5 km	1.0000	1.72E+04	8.61E+03	4.69E+04	6.01E+04	8.43E+04	9.46E+04	1.41E+05	4.85E-
POPULATION WEIGHTED RISK												
CAN FAT/TOTAL	04	59	0-80.5 km	1.0000	8.79E-05	4.25E-05	2.36E-04	3.14E-04	4.66E-04	5.28E-04	7.37E-04	4.85E-
CAN FAT/TOTAL	05	375	0-16.1 km	0.9997	1.91E-04	1.19E-04	4.46E-04	6.32E-04	1.01E-03	1.05E-03	1.49E-03	1.45E-

PEAK DOSE FOUND ON SPATIAL GRID (SV)



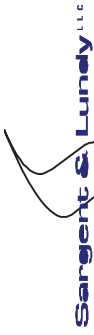
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.4-759 of 1.4-801		

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 02 363	0-1.6 km	0.8843	7.28E-02	8.29E-02	1.08E-01	1.12E-01	NOT-FOUND	NOT-FOUND	1.22E-01	1.22E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 210	0-16.1 km	0.9997	3.93E+02	2.83E+02	9.01E+02	1.22E+03	2.23E+03	2.61E+03	4.01E+03	1.90E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 375		0.9997	2.62E+02	1.62E+02	6.16E+02	8.62E+02	1.13E+03	1.20E+03	2.08E+03	1.45E-
TOTAL INGESTION PATHWAYS DOSE 05 210		0.9997	3.03E+01	2.67E+01	5.91E+01	7.63E+01	1.20E+02	1.38E+02	2.77E+02	3.81E-
LONG-TERM GROUNDSHINE DOSE 05 375		0.9997	2.42E+02	1.46E+02	5.72E+02	7.67E+02	1.11E+03	1.18E+03	2.01E+03	1.45E-
LONG-TERM RESUSPENSION DOSE 05 292		0.9997	2.04E+01	1.06E+01	5.39E+01	6.55E+01	1.06E+02	1.12E+02	1.62E+02	5.71E-
WATER INGESTION DOSE 05 210		0.9881	1.68E+01	1.08E+01	3.89E+01	5.76E+01	1.08E+02	1.25E+02	2.66E+02	3.81E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 210		0.8917	9.50E+01	3.43E+01	2.45E+02	3.57E+02	8.17E+02	1.04E+03	2.20E+03	1.90E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 218		0.8917	5.15E+00	4.33E+00	1.07E+01	1.24E+01	1.72E+01	1.98E+01	2.87E+01	4.92E-
INGESTION OF GRAINS 05 141		0.9997	3.28E-01	3.12E-01	6.25E-01	7.29E-01	8.96E-01	9.79E-01	1.64E+00	2.85E-
INGESTION OF LEAF VEG 05 185		0.9997	3.16E+00	3.05E+00	6.08E+00	7.17E+00	8.60E+00	9.30E+00	1.32E+01	1.87E-
INGESTION OF ROOT CROPS 05 185		0.9997	1.67E+00	1.44E+00	3.14E+00	3.59E+00	4.90E+00	5.15E+00	6.83E+00	1.87E-
INGESTION OF FRUITS 05 202		0.9997	1.48E+00	1.26E+00	2.78E+00	3.15E+00	3.73E+00	4.01E+00	7.40E+00	1.33E-
INGESTION OF LEGUMES 05 185		0.9997	3.79E+00	3.48E+00	7.28E+00	8.45E+00	1.06E+01	1.11E+01	1.60E+01	1.87E-
INGESTION OF BEEF 04 223		0.9997	1.02E+00	8.49E-01	2.04E+00	2.64E+00	4.39E+00	5.17E+00	6.48E+00	8.75E-
INGESTION OF MILK 05 255		0.9997	1.68E+00	1.23E+00	3.65E+00	5.10E+00	7.14E+00	7.43E+00	1.08E+01	2.85E-



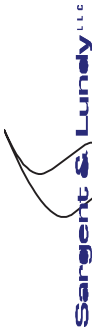
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.4-760 of 1.4-801		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 05 172	0.9997	2.73E-01	2.02E-01	4.52E-01	7.55E-01	2.08E+00	2.29E+00	3.90E+00	1.90E-
INGESTION OF OTHER MEAT CROPS 04 223	0.9997	9.87E-02	8.07E-02	1.72E-01	2.38E-01	6.69E-01	7.62E-01	9.76E-01	8.75E-
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km									
TOTAL LONG-TERM PATHWAYS DOSE 04 59	1.0000	1.72E+04	8.61E+03	4.69E+04	6.01E+04	8.43E+04	9.46E+04	1.41E+05	4.85E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 59	1.0000	1.59E+04	7.61E+03	4.28E+04	5.70E+04	8.19E+04	9.20E+04	1.33E+05	4.85E-
TOTAL INGESTION PATHWAYS DOSE 04 70	1.0000	2.03E+02	1.78E+02	3.26E+02	3.63E+02	4.65E+02	5.08E+02	6.41E+02	2.28E-
LONG-TERM GROUNDSHINE DOSE 04 59	1.0000	1.42E+04	6.95E+03	3.75E+04	5.13E+04	7.53E+04	8.54E+04	1.19E+05	4.85E-
LONG-TERM RESUSPENSION DOSE 04 59	1.0000	1.75E+03	8.27E+02	5.04E+03	6.49E+03	9.44E+03	1.06E+04	1.48E+04	4.85E-
WATER INGESTION DOSE 05 237	1.0000	4.91E+01	3.24E+01	1.08E+02	1.44E+02	2.27E+02	2.52E+02	4.06E+02	1.03E-



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.4-762 of 1.4-801

Client	PSEG Nuclear Development		Prepared by		Date	
Project	PSEG ESPA		Reviewed by		Date	
Proj. No	12380-001	Equip. No.	Approved by		Date	

POP.-DEPENDENT DECONTAMINATION COST 05 40	0.9236	3.02E+09	1.30E+09	8.24E+09	1.10E+10	1.76E+10	2.09E+10	3.70E+10	1.41E-
FARM-DEPENDENT DECONTAMINATION COST 05 40	0.9237	4.40E+07	3.64E+07	8.55E+07	1.02E+08	1.17E+08	1.25E+08	2.12E+08	2.39E-
POP.-DEPENDENT INTERDICTION COST 04 59	0.9236	8.57E+09	3.73E+09	2.33E+10	3.32E+10	5.13E+10	5.52E+10	8.03E+10	4.85E-
FARM-DEPENDENT INTERDICTION COST 04 59	0.9903	1.35E+08	1.04E+08	2.94E+08	3.43E+08	4.76E+08	5.22E+08	6.73E+08	3.42E-
POP.-DEPENDENT CONDEMNATION COST 04 27	0.0241	1.22E+05	0.00E+00	0.00E+00	0.00E+00	1.40E+06	3.96E+06	9.09E+07	1.28E-
FARM-DEPENDENT CONDEMNATION COST 05 27	0.8277	4.59E+05	1.07E+04	1.39E+06	2.06E+06	3.59E+06	4.07E+06	8.41E+06	6.34E-
EMERGENCY PHASE COST 05 288	0.9141	1.32E+08	5.25E+07	3.81E+08	5.51E+08	7.35E+08	7.57E+08	9.68E+08	1.90E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 04 155	0.9785	2.69E+06	1.12E+06	8.61E+06	1.18E+07	1.80E+07	2.10E+07	2.79E+07	8.09E-
CROP DISPOSAL COST 05 155	0.9903	1.34E+08	1.05E+08	2.43E+08	3.00E+08	3.57E+08	3.84E+08	5.20E+08	4.76E-
AFFECTED AREA/POPULATION FARM DECONTAMINATION (HECTARES) 04 59	0.9237	2.83E+04	2.31E+04	5.94E+04	7.17E+04	8.34E+04	8.89E+04	1.21E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	0.9236	3.56E+05	1.54E+05	1.06E+06	1.57E+06	2.24E+06	2.40E+06	3.30E+06	4.85E-
FARM INTERDICTION (HECTARES) 05 155	0.9903	5.69E+04	4.72E+04	1.11E+05	1.35E+05	2.01E+05	2.05E+05	2.28E+05	5.71E-
POP. INTERDICTION (INDIVIDUALS) 04 59	0.9236	3.56E+05	1.54E+05	1.06E+06	1.57E+06	2.24E+06	2.40E+06	3.30E+06	4.85E-
FARM CONDEMNATION (HECTARES) 05 27	0.8277	3.25E+01	1.07E+00	1.08E+02	1.58E+02	2.63E+02	3.06E+02	6.15E+02	6.34E-
POP. CONDEMNATION (INDIVIDUALS) 04 27	0.0241	4.20E-01	0.00E+00	0.00E+00	0.00E+00	5.88E+00	1.47E+01	2.90E+02	1.28E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-764 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 126

SOURCE TERM 21 OF 23:
RC701

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km
L-EDEWBODY

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
1.00E-07	1.00E-10	1.00E-06	1.00E-09
2.00E-07	1.00E+00	2.00E-06	2.00E-09
3.00E-07	1.00E+00	3.00E-06	3.00E-09
5.00E-07	1.00E+00	5.00E-06	5.00E-09
7.00E-07	1.00E+00	7.00E-06	7.00E-09
1.00E-06	1.00E+00	1.00E-05	1.00E-08
2.00E-06	1.00E+00	2.00E-05	2.00E-08
3.00E-06	1.00E+00	3.00E-05	3.00E-08
5.00E-06	1.00E+00	5.00E-05	5.00E-08
7.00E-06	1.00E+00	7.00E-05	7.00E-08
1.00E-05	1.00E+00	1.00E-04	1.00E-07
2.00E-05	1.00E+00	2.00E-04	2.00E-07
3.00E-05	1.00E+00	3.00E-04	3.00E-07
5.00E-05	1.00E+00	5.00E-04	5.00E-07
7.00E-05	1.00E+00	7.00E-04	7.00E-07
1.00E-04	1.00E+00	1.00E-03	1.00E-06
2.00E-04	1.00E+00	2.00E-03	2.00E-06
3.00E-04	1.00E+00	3.00E-03	3.00E-06
5.00E-04	1.00E+00	5.00E-03	5.00E-06
7.00E-04	1.00E+00	7.00E-03	7.00E-06
1.00E-03	1.00E+00	1.00E-02	1.00E-05
2.00E-03	1.00E+00	2.00E-02	2.00E-05



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-773 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

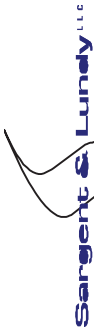
	Safety Related	X	Non-Safety Related						
L-EDEWBODY TOT LIF 0.00E+00	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
L-EDEWBODY TOT LIF 04 217	0-80.5 km	1.0000	9.17E+04	4.33E+04	2.56E+05	3.28E+05	4.88E+05	5.35E+05	7.68E+05

POPULATION WEIGHTED RISK

ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 217	0-80.5 km	1.0000	1.37E-03	6.16E-04	3.78E-03	5.13E-03	7.59E-03	8.52E-03	1.24E-02
CAN FAT/TOTAL 0.00E+00	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 04 225	0-1.6 km	0.0450	1.25E-03	0.00E+00	0.00E+00	0.00E+00	4.34E-02	6.03E-02	2.35E-01	2.76E-
----------------------	----------	--------	----------	----------	----------	----------	----------	----------	----------	--------



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.4-775 of 1.4-801

Client PSEG Nuclear Development	X	Non-Safety Related	Prepared by
Project PSEG ESPA			Reviewed by
Proj. No 12380-001		Equip. No.	Approved by
			Date

L-EDEWBODY 05 210	TOT LIF	0-16.1 km	1.0000	7.48E+03	2.86E+03	1.89E+04	2.71E+04	6.34E+04	8.30E+04	2.00E+05	1.90E-
L-EDEWBODY 04 217	TOT LIF	0-80.5 km	1.0000	9.91E+04	5.02E+04	2.70E+05	3.42E+05	5.11E+05	5.56E+05	7.72E+05	1.64E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL 04 286		0-80.5 km	0.0814	6.37E-09	0.00E+00	0.00E+00	2.43E-09	1.84E-07	2.97E-07	2.05E-06	1.81E-
ERL FAT/TOTAL 0.00E+00		0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL 0.00E+00		0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL 05 339		3.2-4.8 km	0.0558	2.34E-04	0.00E+00	0.00E+00	1.64E-05	3.14E-03	1.09E-02	1.29E-01	1.82E-
CAN FAT/TOTAL 04 217		0-80.5 km	1.0000	1.49E-03	7.14E-04	3.98E-03	5.36E-03	7.81E-03	8.71E-03	1.25E-02	1.64E-
CAN FAT/TOTAL 05 210		0-16.1 km	1.0000	1.63E-02	6.02E-03	4.17E-02	5.99E-02	1.30E-01	1.84E-01	4.40E-01	1.90E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 04 339		0-1.6 km	1.0000	1.00E+02	9.18E+01	1.87E+01	2.27E+02	3.04E+02	3.11E+02	3.38E+02	3.61E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-776 of 1.4-801		

Client	PSEG Nuclear Development	Prepared by	
Project	PSEG ESPA	Reviewed by	
Proj. No	12380-001	Approved by	
	Equip. No.		

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

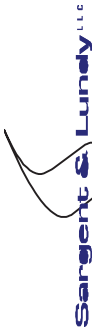
SOURCE TERM 22 OF 23:
 RC702

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10	19:24:48	PAGE 130	PROB	QUANTILES	PEAK	PEAK						
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PEAK	PEAK
HEALTH EFFECTS CASES												
CAN FAT/TOTAL	0-80.5 km	1.0000	2.92E+03	1.48E+03	7.78E+03	9.79E+03	1.23E+04	1.35E+04	1.35E+04	2.33E+04	2.33E+04	1.57E-
04 272												
CAN FAT/TOTAL	0-16.1 km	0.9932	4.19E+01	3.18E+01	9.52E+01	1.20E+02	1.95E+02	2.20E+02	2.20E+02	5.02E+02	5.02E+02	6.46E-
06 203												
POPULATION DOSE (Sv)												
L-EDEWBODY TOT LIF	0-16.1 km	0.9932	8.96E+02	6.83E+02	2.09E+03	4.13E+03	4.90E+03	4.90E+03	4.90E+03	1.18E+04	1.18E+04	6.46E-
06 203												
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	6.69E+04	3.39E+04	1.68E+05	2.17E+05	3.01E+05	3.30E+05	3.30E+05	5.46E+05	5.46E+05	1.57E-
04 272												
POPULATION WEIGHTED RISK												
CAN FAT/TOTAL	0-80.5 km	1.0000	2.36E-04	1.14E-04	7.00E-04	7.96E-04	1.04E-03	1.12E-03	1.12E-03	1.44E-03	1.44E-03	4.85E-
04 59												
CAN FAT/TOTAL	0-16.1 km	0.9143	2.20E-04	1.14E-04	5.56E-04	7.75E-04	1.19E-03	1.34E-03	1.34E-03	2.74E-03	2.74E-03	6.46E-
06 203												

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.4-777 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 03 59	0-1.6 km	0.1977	1.08E-02	0.00E+00	3.75E-02	1.02E-01	1.17E-01	NOT-FOUND	1.21E-01	6.36E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 06 203	0-16.1 km	0.9932	8.96E+02	6.83E+02	2.09E+03	2.68E+03	4.13E+03	4.90E+03	1.18E+04	6.46E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 06 203		0.9143	3.06E+02	1.52E+02	7.80E+02	1.06E+03	1.55E+03	1.83E+03	3.84E+03	6.46E-
TOTAL INGESTION PATHWAYS DOSE 05 210		0.9932	3.51E+02	2.36E+02	7.90E+02	1.16E+03	2.19E+03	2.60E+03	5.27E+03	3.81E-
LONG-TERM GROUNDSHINE DOSE 06 203		0.9143	2.91E+02	1.43E+02	7.50E+02	1.04E+03	1.53E+03	1.80E+03	3.82E+03	6.46E-
LONG-TERM RESUSPENSION DOSE 05 155		0.9143	1.51E+01	6.04E+00	3.95E+01	5.77E+01	1.01E+02	1.07E+02	1.53E+02	5.71E-
WATER INGESTION DOSE 05 210		0.9881	3.32E+02	2.15E+02	7.76E+02	1.15E+03	2.18E+03	2.59E+03	5.27E+03	3.81E-
POP.-DEPENDENT DECONTAMINATION DOSE 06 203		0.8087	2.30E+02	8.51E+01	6.18E+02	9.45E+02	2.02E+03	2.32E+03	7.60E+03	6.46E-
FARM-DEPENDENT DECONTAMINATION DOSE 06 204		0.8751	9.29E+00	7.82E+00	2.00E+01	2.38E+01	3.35E+01	3.75E+01	8.34E+01	5.90E-
INGESTION OF GRAINS 04 288		0.9535	4.85E-01	4.65E-01	9.04E-01	1.04E+00	1.28E+00	1.40E+00	2.27E+00	1.05E-
INGESTION OF LEAF VEG 04 288		0.9535	4.81E+00	4.60E+00	8.95E+00	1.04E+01	1.27E+01	1.39E+01	2.27E+01	1.05E-
INGESTION OF ROOT CROPS 04 288		0.9535	2.58E+00	2.42E+00	4.86E+00	5.62E+00	7.36E+00	7.96E+00	1.24E+01	1.05E-
INGESTION OF FRUITS 04 288		0.9535	2.15E+00	2.08E+00	3.93E+00	4.80E+00	6.61E+00	7.21E+00	9.74E+00	1.05E-
INGESTION OF LEGUMES 04 288		0.9535	5.81E+00	5.59E+00	1.06E+01	1.19E+01	1.57E+01	1.76E+01	2.75E+01	1.05E-
INGESTION OF BEEF 04 306		0.9535	1.19E+00	1.01E+00	2.31E+00	3.28E+00	5.72E+00	6.69E+00	1.02E+01	1.05E-
INGESTION OF MILK 04 260		0.9535	1.76E+00	1.38E+00	3.23E+00	4.30E+00	9.57E+00	1.09E+01	1.45E+01	7.04E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No.	2009-11222	
Rev.	2	Date
Page	1.4-782 of 1.4-801	

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

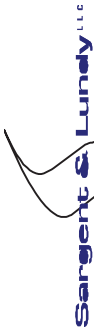
MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 132

SOURCE TERM 22 OF 23:
RC702

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	PROB>=X	PROB>=X	PROB>=X
1.00E-06	1.00E-09	1.00E-04	1.00E-09
2.00E-06	1.00E+00	2.00E-04	2.00E-09
3.00E-06	1.00E+00	3.00E-04	3.00E-09
5.00E-06	1.00E+00	5.00E-04	5.00E-09
7.00E-06	1.00E+00	7.00E-04	7.00E-09
1.00E-05	1.00E+00	1.00E-03	1.00E-08
2.00E-05	1.00E+00	2.00E-03	2.00E-08
3.00E-05	1.00E+00	3.00E-03	3.00E-08
5.00E-05	1.00E+00	5.00E-03	5.00E-08
7.00E-05	1.00E+00	7.00E-03	7.00E-08
1.00E-04	1.00E+00	1.00E-02	1.00E-07
2.00E-04	1.00E+00	2.00E-02	2.00E-07
3.00E-04	1.00E+00	3.00E-02	3.00E-07
5.00E-04	1.00E+00	5.00E-02	5.00E-07
7.00E-04	1.00E+00	7.00E-02	7.00E-07
1.00E-03	1.00E+00	1.00E-01	1.00E-06
2.00E-03	9.95E-01	2.00E-01	2.00E-06
3.00E-03	9.91E-01	3.00E-01	3.00E-06
5.00E-03	9.80E-01	5.00E-01	5.00E-06
7.00E-03	9.68E-01	7.00E-01	7.00E-06
1.00E-02	9.55E-01	1.00E+00	1.00E-05
2.00E-02	9.37E-01	2.00E+00	2.00E-05



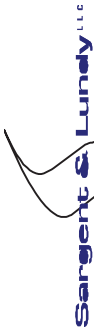
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.4-783 of 1.4-801	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related						
		</							

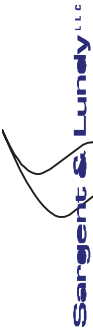


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-791 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 225	0-16.1 km	0.4032	2.36E+00	0.00E+01	0.00E+00	3.79E+01	1.24E+02	5.57E+02	6.12E+03	1.39E-
L-EDEWBODY TOT LIF 06 210	0-80.5 km	1.0000	4.79E+05	1.16E+05	1.38E+06	3.59E+06	4.19E+06	6.76E+06	9.51E-	
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 06 210	0-80.5 km	1.0000	7.35E-03	1.66E-03	2.22E-02	3.28E-02	5.69E-02	6.73E-02	1.06E-01	9.51E-
CAN FAT/TOTAL 05 225	0-16.1 km	0.4032	4.89E-05	0.00E+00	7.86E-05	1.09E-03	2.52E-04	1.30E-03	1.29E-02	1.39E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 225	0-1.6 km	0.7099	1.29E+00	8.75E-03	3.64E+00	4.68E+00	1.72E+01	4.56E+01	2.76E-	



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

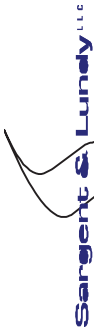
ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page 1.4-793 of 1.4-801

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

L-EDEWBODY 05 225	TOT LIF	0-16.1 km	1.0000	1.20E+04	1.89E+03	3.53E+04	5.27E+04	1.09E+05	1.43E+05	5.49E+05	1.56E-
L-EDEWBODY 06 210	TOT LIF	0-80.5 km	1.0000	4.91E+05	1.26E+05	1.40E+06	2.19E+06	3.67E+06	4.30E+06	6.87E+06	9.51E-
POPULATION WEIGHTED RISK											
05 225	ERL FAT/TOTAL	0-80.5 km	0.1218	3.72E-07	0.00E+00	8.08E-09	2.91E-07	8.28E-06	1.64E-05	3.96E-04	1.56E-
0.00E+00	ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
05 75	ERL FAT/TOTAL	3.2-4.8 km	0.0679	1.22E-03	0.00E+00	0.00E+00	2.06E-04	1.75E-02	4.74E-02	6.01E-01	1.39E-
06 210	CAN FAT/TOTAL	0-80.5 km	1.0000	7.54E-03	1.88E-03	2.25E-02	3.36E-02	5.78E-02	6.77E-02	1.08E-01	9.51E-
04 276	CAN FAT/TOTAL	0-16.1 km	1.0000	2.46E-02	3.57E-03	7.47E-03	1.08E-01	2.19E-01	2.75E-01	8.71E-01	1.49E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
04 371	L-EDEWBODY	0-1.6 km	1.0000	2.88E+01	6.61E+00	4.50E+01	1.22E+02	4.69E+02	5.34E+02	8.56E+02	1.14E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.4-794 of 1.4-801		

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = U.S. EPR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 23 OF 23:
 RC802

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 19:24:48	PAGE 136	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	3.48E+03	1.41E+03	9.99E+03	1.39E+04	2.29E+04	2.56E+04	3.55E+04	1.71E-	
04 186											
CAN FAT/TOTAL	0-16.1 km	0.9178	6.44E+01	2.57E+01	1.69E+02	2.44E+02	5.19E+02	6.69E+02	2.10E+03	1.28E-	
05 368											
POPULATION DOSE (SV)											
L-EDEWBODY TOT LIF	0-16.1 km	0.9178	1.32E+03	5.46E+02	3.50E+03	5.18E+03	1.03E+04	1.34E+04	3.92E+04	1.28E-	
05 368											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	7.95E+04	3.22E+04	2.22E+05	3.35E+05	5.43E+05	6.02E+05	8.30E+05	1.71E-	
04 186											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	0.9683	2.13E-04	7.67E-05	6.44E-04	9.50E-04	1.13E-03	1.20E-03	2.02E-03	9.51E-	
06 147											
CAN FAT/TOTAL	0-16.1 km	0.7861	1.93E-04	2.99E-05	5.51E-04	8.08E-04	1.29E-03	1.50E-03	2.45E-03	5.71E-	
05 330											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.4-800 of 1.4-801

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

MACCS2 10-JAN-10 19:24:48 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 138

SOURCE TERM 23 OF 23:
RC802

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-06	1.00E-07	1.00E-05	1.00E-09
2.00E-06	2.00E-07	2.00E-05	2.00E-09
3.00E-06	3.00E-07	3.00E-05	3.00E-09
5.00E-06	5.00E-07	5.00E-05	5.00E-09
7.00E-06	7.00E-07	7.00E-05	7.00E-09
1.00E-05	1.00E-06	1.00E-04	1.00E-08
2.00E-05	2.00E-06	2.00E-04	2.00E-08
3.00E-05	3.00E-06	3.00E-04	3.00E-08
5.00E-05	5.00E-06	5.00E-04	5.00E-08
7.00E-05	7.00E-06	7.00E-04	7.00E-08
1.00E-04	1.00E-05	1.00E-03	1.00E-07
2.00E-04	2.00E-05	2.00E-03	2.00E-07
3.00E-04	3.00E-05	3.00E-03	3.00E-07
5.00E-04	5.00E-05	5.00E-03	5.00E-07
7.00E-04	7.00E-05	7.00E-03	7.00E-07
1.00E-03	1.00E-04	1.00E-02	1.00E-06
2.00E-03	2.00E-04	2.00E-02	2.00E-06
3.00E-03	3.00E-04	3.00E-02	3.00E-06
5.00E-03	5.00E-04	5.00E-02	5.00E-06
7.00E-03	7.00E-04	7.00E-02	7.00E-06
1.00E-02	1.00E-03	1.00E-01	1.00E-05
2.00E-02	2.00E-03	2.00E-01	2.00E-05
3.00E-02	3.00E-03	3.00E-01	3.00E-05
5.00E-02	5.00E-03	5.00E-01	5.00E-05
7.00E-02	7.00E-03	7.00E-01	7.00E-05



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related						
Equip. No.									
3.00E-02	7.68E-01	3.00E-03	5.90E-01	3.00E-01	7.61E-01	3.00E-05	5.29E-01		
5.00E-02	7.44E-01	5.00E-03	5.53E-01	5.00E-01	7.00E-01	5.00E-05	5.19E-01		
7.00E-02	7.25E-01	7.00E-03	5.25E-01	7.00E-01	6.81E-01	7.00E-05	5.19E-01		
1.00E-01	6.87E-01	1.00E-02	4.85E-01	1.00E+00	6.81E-01	1.00E-04	4.87E-01		
2.00E-01	6.64E-01	2.00E-02	4.39E-01	2.00E+00	6.69E-01	2.00E-04	4.87E-01		
3.00E-01	5.79E-01	3.00E-02	4.35E-01	3.00E+00	6.38E-01	3.00E-04	4.87E-01		
5.00E-01	5.34E-01	5.00E-02	4.34E-01	5.00E+00	5.43E-01	5.00E-04	4.87E-01		
7.00E-01	4.90E-01	7.00E-02	4.34E-01	7.00E+00	4.91E-01	7.00E-04	4.87E-01		
1.00E+00	4.40E-01	1.00E-01	4.23E-01	1.00E+01	3.84E-01	1.00E-03	4.80E-01		
2.00E+00	3.22E-01	2.00E-01	4.10E-01	2.00E+01	2.07E-01	2.00E-03	4.73E-01		
3.00E+00	2.58E-01	3.00E-01	3.90E-01	3.00E+01	1.59E-01	3.00E-03	4.73E-01		
5.00E+00	9.96E-02	5.00E-01	3.56E-01	5.00E+01	8.85E-02	5.00E-03	4.73E-01		
7.00E+00	6.17E-02	7.00E-01	3.45E-01	7.00E+01	6.01E-02	7.00E-03	4.73E-01		
1.00E+01	4.04E-02	1.00E+00	3.41E-01	1.00E+02	5.67E-02	1.00E-02	4.72E-01		
2.00E+01	3.64E-02	2.00E+00	2.63E-01	2.00E+02	3.68E-02	2.00E-02	4.47E-01		
3.00E+01	1.39E-02	3.00E+00	1.70E-01	3.00E+02	3.64E-02	3.00E-02	4.24E-01		
5.00E+01	3.56E-03	5.00E+00	4.17E-02	5.00E+02	8.30E-03	5.00E-02	3.78E-01		
7.00E+01	2.76E-04	7.00E+00	3.56E-02	7.00E+02	6.37E-04	7.00E-02	3.23E-01		
8.56E+01	2.76E-04	1.00E+01	1.88E-02	8.56E+02	1.14E-04	1.00E-01	2.13E-01		
N.D.	N.D.	2.00E+01	3.44E-03	N.D.	N.D.	1.22E-01	1.27E-02		
N.D.	N.D.	3.00E+01	2.76E-04	N.D.	N.D.	N.D.	N.D.		
N.D.	N.D.	4.56E+01	2.76E-04	N.D.	N.D.	N.D.	N.D.		
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		

Successful completion of MACCS2 was achieved!
This job required a total of 94.906 CPU seconds

Input processing required 0.070 CPU seconds
Simulation required 90.469 CPU seconds
Output processing required 4.367 CPU seconds



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	1	Date
Page	1.5-1	of 1.5-373

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT I.5
MACCS2 Output File Data (ABWR, 4300 MWt)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.5-2 of 1.5-374
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 P1: ATMOS USER INPUT (UNIT 24) = E.4.INP
 P2: EARLY USER INPUT (UNIT 25) = E.2.INP
 P3: CHRONC USER INPUT (UNIT 26) = E.3.INP
 P4: METEOROLOGY DATA (UNIT 28) = C.INP
 P5: SITE DATA INPUT (UNIT 29) = D.INP
 P6: LIST OUTPUT (UNIT 06) = I.5.OUT

USER INPUT IS READ FROM UNIT 24
 RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.
 THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
 THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

RECORD
 NUMBER

RECORD

```

*****
* FILE NAME: E.4.INP
*
* Sargent & Lundy (10/2009)
*
* Run Identification (RI) Data
*****
*
* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT
*
1 RIATNAM1001 'ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS'
*
* GEOMETRY (GE) DATA
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

```

*
* NUMBER OF RADIAL SPATIAL ELEMENTS
*
2 GENUMRAD001 10
*
* SPATIAL ENDPOINT DISTANCES IN MILES (MATCHES SITE FILE)
*
* END001 1 2 3 4 5
* END002 10 20 30 40 50
*
* SPATIAL ENDPOINT DISTANCES IN KILOMETERS
*
3 GESPAEND001 1.61 3.22 4.83 6.44 8.05
4 GESPAEND002 16.1 32.2 48.3 64.4 80.5
*
*****
* NUCLIDE DATA
*****
*
* NUMBER OF PSEUDO-STABLE NUCLIDES DEFINED IN THE MODEL
* (USED TO TRUNCATE THE DECAY CHAINS) - USER'S GUIDE PG.C-1
*
5 ISNUMSTB001 27
*
* LIST OF PSEUDO-STABLE NUCLIDES
*
6 ISNAMSTB001 I-129 (daughter of Te-129 and Te-129m)
7 ISNAMSTB002 Xe-131m (daughter of I-131)
8 ISNAMSTB003 Xe-133m (daughter of I-133)
9 ISNAMSTB004 Xe-135m (daughter of I-135)
10 ISNAMSTB005 Cs-135 (daughter of Xe-135 and Xe-135m)
11 ISNAMSTB006 Sm-147 (daughter of Pm-147)
12 ISNAMSTB007 U-234 (daughter of Pu-238)
13 ISNAMSTB008 U-235 (daughter of Pu-239)
14 ISNAMSTB009 U-236 (daughter of Pu-240)

```



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-4 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related	
15	ISNAMSTB010		U-237	(daughter of Pu-241)
16	ISNAMSTB011		Np-237	(daughter of Am-241)
17	ISNAMSTB012		Rb-87	(daughter of Kr-87)
18	ISNAMSTB013		Ba-137m	(daughter of Cs-137)
19	ISNAMSTB014		Rb-88	(daughter of Kr-88)
20	ISNAMSTB015		Y-91m	(daughter of Sr-91)
21	ISNAMSTB016		Zr-93	(daughter of Y-93)
22	ISNAMSTB017		Nb-93m	(daughter of Zr-93)
23	ISNAMSTB018		Nb-95m	(daughter of Zr-95)
24	ISNAMSTB019		Nb-97	(daughter of Zr-97 and Nb-97m)
25	ISNAMSTB020		Nb-97m	(daughter of Zr-97)
26	ISNAMSTB021		Tc-99	(daughter of Mo-99)
27	ISNAMSTB022		Rh-103m	(daughter of Ru-103)
28	ISNAMSTB023		Rh-106	(daughter of Ru-106)
29	ISNAMSTB024		Te-131	(daughter of Te-131m)
30	ISNAMSTB025		Pr-144	(daughter of Ce-144 and Pr-144m)
31	ISNAMSTB026		Pr-144m	(daughter of Ce-144)
32	ISNAMSTB027		Pm-147	(daughter of Nd-147)

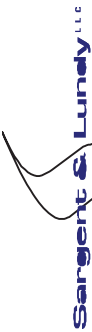
* NUMBER OF RADIOACTIVE NUCLIDES DEFINED IN THE MODEL
 * NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

33 ISNUMISO001 60

* NUMBER OF CHEMICAL ELEMENT GROUPS DEFINED IN THE MODEL
 * NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

34 ISMAXGRP001 7

- * GROUP 1 - NOBLE GASES
- * GROUP 2 - IODINE
- * GROUP 3 - CESIUM, RUBIDIUM
- * GROUP 4 - TELLURIUM GROUP
- * GROUP 5/9 - STRONTIUM
- * GROUP 6 - MOLYBDENUM, COBALT, RUTHENIUM, TECHNETIUM



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.5-5 of 1.5-374

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

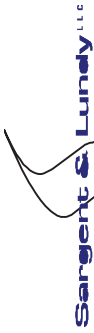
* GROUP 7/8 - LANTHANUM, YTTRIUM, NEODYMIUM, PROMETHIUM, AMERICIUM, CURIUM
 * GROUP 8/8 - CERIUM, ACTINIDES (PLUTONIUM, NEPTUNIUM)
 * GROUP 9/5 - BARIUM

* WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP
 * ALL NUCLIDE GROUPS EXCEPT NOBLE GAS ARE ASSUMED SUBJECT
 * TO BOTH WET AND DRY DEPOSITION.
 * USER'S GUIDE APPENDIX C

	WETDEP	DRYDEP
35	ISDEPFLA001	.FALSE.
36	ISDEPFLA002	.TRUE.
37	ISDEPFLA003	.TRUE.
38	ISDEPFLA004	.TRUE.
39	ISDEPFLA005	.TRUE.
40	ISDEPFLA006	.TRUE.
41	ISDEPFLA007	.TRUE.
	ISDEPFLA008	.TRUE.
	ISDEPFLA009	.TRUE.

* CHEMICAL ELEMENT GROUP ASSIGNMENT
 * USER'S GUIDE APPENDIX C

	NUCNAM	IGROUP
42	ISOTGGRP001	Co-58
43	ISOTGGRP002	Co-60
44	ISOTGGRP003	Kr-85
45	ISOTGGRP004	Kr-85m
46	ISOTGGRP005	Kr-87
47	ISOTGGRP006	Kr-88
48	ISOTGGRP007	Rb-86
49	ISOTGGRP008	Sr-89
50	ISOTGGRP009	Sr-90

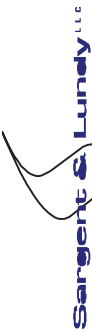


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-6 of 1.5-374

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related	
51	ISOTFGRP010		Sr-91	5
52	ISOTFGRP011		Sr-92	5
53	ISOTFGRP012		Y-90	7
54	ISOTFGRP013		Y-91	7
55	ISOTFGRP014		Y-92	7
56	ISOTFGRP015		Y-93	7
57	ISOTFGRP016		Zr-95	7
58	ISOTFGRP017		Zr-97	7
59	ISOTFGRP018		Nb-95	7
60	ISOTFGRP019		Mo-99	6
61	ISOTFGRP020		Tc-99m	6
62	ISOTFGRP021		Ru-103	6
63	ISOTFGRP022		Ru-105	6
64	ISOTFGRP023		Ru-106	6
65	ISOTFGRP024		Rh-105	6
66	ISOTFGRP025		Sb-127	4
67	ISOTFGRP026		Sb-129	4
68	ISOTFGRP027		Te-127	4
69	ISOTFGRP028		Te-127m	4
70	ISOTFGRP029		Te-129	4
71	ISOTFGRP030		Te-129m	4
72	ISOTFGRP031		Te-131m	4
73	ISOTFGRP032		Te-132	4
74	ISOTFGRP033		I-131	2
75	ISOTFGRP034		I-132	2
76	ISOTFGRP035		I-133	2
77	ISOTFGRP036		I-134	2
78	ISOTFGRP037		I-135	2
79	ISOTFGRP038		Xe-133	1
80	ISOTFGRP039		Xe-135	1
81	ISOTFGRP040		Cs-134	3
82	ISOTFGRP041		Cs-136	3
83	ISOTFGRP042		Cs-137	3
84	ISOTFGRP043		Ba-139	5 *9
85	ISOTFGRP044		Ba-140	5 *9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-7 of 1.5-374

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

86	ISOTPGRP045	Ia-140	7		
87	ISOTPGRP046	Ia-141	7		
88	ISOTPGRP047	Ia-142	7		
89	ISOTPGRP048	Ce-141	7 *8		
90	ISOTPGRP049	Ce-143	7 *8		
91	ISOTPGRP050	Ce-144	7 *8		
92	ISOTPGRP051	Pr-143	7		
93	ISOTPGRP052	Nd-147	7		
94	ISOTPGRP053	Np-239	7 *8		
95	ISOTPGRP054	Pu-238	7 *8		
96	ISOTPGRP055	Pu-239	7 *8		
97	ISOTPGRP056	Pu-240	7 *8		
98	ISOTPGRP057	Pu-241	7 *8		
99	ISOTPGRP058	Am-241	7		
100	ISOTPGRP059	Cm-242	7		
101	ISOTPGRP060	Cm-244	7		
*	*****				
*	* WET DEPOSITION (WD) DATA				
*	*****				
*	* WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR				
*	*****				
102	WDCWASH1001	9.5E-5	*NUREG/CR-4551 PART 7, TABLE 2.9		
*	*****				
*	* WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR				
*	*****				
103	WDCWASH2001	0.8	*NUREG/CR-4551 PART 7, TABLE 2.9		
*	*****				
*	* DRY DEPOSITION (DD) DATA				
*	*****				
*	* NUMBER OF PARTICLE SIZE GROUPS				
*	*****				



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.5-8 of 1.5-374

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

104 DDNPSGRP001 1 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
 * DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
 *
 105 DDVDEPOS001 0.01 *NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C
 *
 *
 * DISPERSION PARAMETER (DP) DATA
 *
 *
 * # OF DISTANCES IN PLUME-SIZE TABLES--WHICH CAN BE USED AS AN ALTERNATIVE TO
 * THE POWER-LAW MODEL: (TO UTILIZE THE POWER-LAW MODEL, SET NUM_DIST TO ZERO
 * OR DELETE THE FOLLOWING DATA CARD)
 *
 106 NUM_DIST001 0
 *
 * POWER-LAW FUNCTION IS OF FORM: SIGMA = A * X ** B
 *
 * TADMOR ND GUR PARAMETRIZATION FOR DISTANCE RANGE 0.5 to 5.0 KM
 * (NUREG/CR-4551 PART 7 TABLE 2.4)
 *
 * P-G CLASS: A B C D E F
 107 DPCYSIGA001 0.3658 0.2751 0.2089 0.1474 0.1046 0.0722
 108 DPCYSIGB001 0.9031 0.9031 0.9031 0.9031 0.9031 0.9031
 109 DPCZSIGA001 2.5E-4 1.9E-3 0.2 0.3 0.4 0.2
 110 DPCZSIGB001 2.125 1.6021 0.8543 0.6532 0.6021 0.6020
 *
 * LINEAR SCALING FACTOR FOR SIGMA-Y FUNCTION, NORMALLY 1
 *
 111 DPYSCALE001 1.0
 *
 * LINEAR SCALING FACTOR FOR SIGMA-Z FUNCTION,
 * NORMALLY USED FOR SURFACE ROUGHNESS LENGTH CORRECTION.
 * (Z1 / Z0) ** 0.2, FROM CRAC2 WE HAVE (10 CM / 3 CM) ** 0.2 = 1.27
 * SEE NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.5-9 of 1.5-374
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

112 DPZSCALE001 1.27

* REF/BASIS:

* MACCS COMPUTES SIGMA-Y AND SIGMA-Z AS FOLLOWS:

* SIGMA-Y = A * X ** B

* SIGMA-Z = C * X ** D

* THE SIGMA-Y COEFFICIENTS (A AND B) AND SIGMA-Z COEFFICIENTS (C AND D) ARE TAKEN FROM NUREG-4551, VOL. 2, REV. 1, PART 7, SECTION 2.4.

* NO SIGMA-Y SCALING IS REQUIRED/USED.

* SIGMA-Z SCALING VALUE CONSISTENT WITH SAMPLE PROBLEMS IN

* NUREG 4551 APPENDIX A/USER'S GUIDE APPENDIX C

 * PLUME MEANDER EXPANSION FACTOR DATA

* TIME BASE FOR EXPANSION FACTOR (SECONDS)

113 PMTIMBAS001 600.0 * 10 MINUTES

* BREAK POINT FOR FORMULA CHANGE (SECONDS)

114 PMBRKPNT001 3600.0 * 1 HOUR

* EXPONENTIAL EXPANSION FACTOR NUMBER 1

115 PMXPFAC1001 0.2

* EXPONENTIAL EXPANSION FACTOR NUMBER 2



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* 116 PMXPFAC2001 0.25
 *
 * REF/BASIS:
 *
 * ABOVE VALUES CONSISTENT WITH SECTION 2.3.2 FROM NUREG/CR-4551.
 *
 *
 *
 * PLUME RISE DATA
 *
 * THE FOLLOWING SCALING FACTORS COULD BE USED TO MODIFY THE MACCS METHOD OF
 * PERFORMING PLUME RISE CALCS.
 *
 * SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A BOUYANT PLUME
 * (USED BY FUNCTION CAUGHT)
 *
 * 117 PRSCLCRW001 1.0
 *
 * SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
 * (USED BY FUNCTION PLMRIS)
 *
 * 118 PRSCLADP001 1.0
 *
 * SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
 * (USED BY FUNCTION PLMRIS)
 *
 * 119 PRSCLEFP001 1.0
 *
 * REF/BASIS:
 *
 * THE SCALING FACTORS CAN BE USED TO MODIFY THE RESULTS OF THE HARD-WIRED
 * PLUME RISE CALCULATIONS PERFORMED BY MACCS. THIS FUNCTIONALITY IS NOT UTILIZED
 * IN THIS ANALYSIS (SCALING FACTORS SET TO 1).



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.5-11	of 1.5-374
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*
* *****
* WAKE EFFECTS DATA
* *****
*
* DETERMINATION OF WAKE EFFECTS HAS BEEN REVISED FOR MACCS2. THE WIDTH VARIABLE
* IS NO LONGER INCLUDED. ADDITIONALLY, VALUES MUST BE INCLUDED FOR EACH PLUME.
*
* VENDOR DATA (ATTACHMENT A.1):
* BUILDING WIDTH = 54.0 m
* BUILDING HEIGHT = 37.7 m
*
* INITIAL VALUE FOR SIGMA-Y FOR EACH PLUME (4)
*
120 SIGYINIT001 12.6 *INITIAL SIGMA-Y = W/4.3 = 54.0/4.3 = 12.6
*
* INITIAL VALUE FOR SIGMA-Z FOR EACH PLUME
*
121 SIGZINIT001 17.5 *INITIAL SIGMA-Z = H/2.15 = 37.7/2.15 = 17.5
*
* BUILDING HEIGHT (METERS)
*
122 WEBUILDH001 37.7
*
* *****
* RELEASE DATA (1/2, SEE END OF FILE SECOND PORTION)
* *****
*
* PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP
* UNIFORM SIZE DISTRIBUTION IS ASSUMED FOR ALL 7 CHEMICAL GROUPS
*
123 RDPDIST001 1.0
124 RDPDIST002 1.0
125 RDPDIST003 1.0
126 RDPDIST004 1.0

```

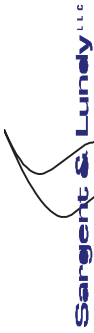


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.5-12 of 1.5-374

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

127	RDPSDIST005	1.0		
128	RDPSDIST006	1.0		
129	RDPSDIST007	1.0		
	* RDPSDIST008	1.0		
	* RDPSDIST009	1.0		
	*			
	* ABWR CORE INVENTORY BASED ON VENDOR DATA (ATTACHMENT A.1)			
	* NUCNAM CORINV (Bq/MWt)			
	* THE INVENTORY AS GIVEN BELOW IS IN UNITS OF Bq/MWt, IT NEEDS TO BE IN UBITS OF Bq			
	* VARIABLE RDCORCA001 IS SET TO 4300 MWt FOR THE NECESSARY UNIT CONVERSION			
	* SEE USER'S GUIDE PG. 5-28			
	*			
130	RDCORINV001	Co-58	3.515E+12	
131	RDCORINV002	Co-60	2.118E+10	
132	RDCORINV003	Kr-85	1.116E+13	
133	RDCORINV004	Kr-85m	2.492E+14	
134	RDCORINV005	Kr-87	4.779E+14	
135	RDCORINV006	Kr-88	6.771E+14	
136	RDCORINV007	Rb-86	1.737E+12	
137	RDCORINV008	Sr-89	9.142E+14	
138	RDCORINV009	Sr-90	9.555E+13	
139	RDCORINV010	Sr-91	1.170E+15	
140	RDCORINV011	Sr-92	1.247E+15	
141	RDCORINV012	Y-90	1.031E+14	
142	RDCORINV013	Y-91	1.191E+15	
143	RDCORINV014	Y-92	1.253E+15	
144	RDCORINV015	Y-93	1.448E+15	
145	RDCORINV016	Zr-95	1.635E+15	
146	RDCORINV017	Zr-97	1.679E+15	
147	RDCORINV018	Nb-95	1.634E+15	
148	RDCORINV019	Mo-99	1.853E+15	
149	RDCORINV020	Tc-99m	1.599E+15	
150	RDCORINV021	Ru-103	1.569E+15	
151	RDCORINV022	Ru-105	1.106E+15	
152	RDCORINV023	Ru-106	5.569E+14	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-13	of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	Non-Safety Related	Equip. No.	
153				Rh-105
154				Sb-127
155				Sb-129
156				Te-127
157				Te-127m
158				Te-129
159				Te-129m
160				Te-131m
161				Te-132
162				I-131
163				I-132
164				I-133
165				I-134
166				I-135
167				Xe-133
168				Xe-135
169				Cs-134
170				Cs-136
171				Cs-137
172				Ba-139
173				Ba-140
174				La-140
175				La-141
176				La-142
177				Ce-141
178				Ce-143
179				Ce-144
180				Pr-143
181				Nd-147
182				Np-239
183				Pu-238
184				Pu-239
185				Pu-240
186				Pu-241
187				Am-241



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.5-14 of 1.5-374

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

```

188 RDCORINV059 Cm-242 1.187E+14
189 RDCORINV060 Cm-244 2.719E+12
*
* SCALING FACTOR TO ADJUST THE FOR THE POWER LEVEL
*
* RDCORSCA001 4300.0 *SCALING FACTOR (MWT)
*
* DAUGHTER INGROWTH PRODUCTS RELEASED IN THE SAME PROPORTION AS THE PARENT
*
191 RDAPLFR001 PARENT
*
* OUTPUT CONTROL DATA
*
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
*
192 OCENDAT1001 .FALSE. *SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC
*
193 OCIDEBUG001 0 *0 SKIPS DEBUG PRINTING
*
194 TYPE0NUMBER 0 *VALUE = 0 = NO ATMOSPHERIC (TYPE 0) RESULTS PRINTED
*
* METEOROLOGICAL SAMPLING DATA
*
* METEOROLOGICAL SAMPLING OPTION CODE:
*
* METCOD = 1, USER SPECIFIED DAY AND HOUR IN THE YEAR (FROM MET FILE),
* 2, WEATHER CATEGORY BIN SAMPLING,
* 3, 120 HOURS OF WEATHER SPECIFIED ON THE ATMOS USER INPUT FILE,
* 4, CONSTANT MET (BOUNDARY WEATHER USED FROM THE START),
* 5, STRATIFIED RANDOM SAMPLES FOR EACH DAY OF THE YEAR.
*
* METEOROLOGICAL SAMPLING (M1) DATA
*

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-15 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

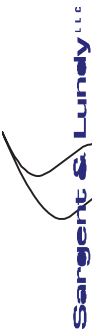
195 M1METCOD001 2 * MET FILE PROVIDED IN ATTACHMENT C
*
* LAST SPATIAL INTERVAL FOR MEASURED WEATHER
*

* BOUNDARY WEATHER (M2) DATA

*
196 M2LIMSPA001 10 * INTERVAL 10 = 50 MILES
*
* BOUNDARY WEATHER MIXING LAYER HEIGHT
*
197 M2BNDMXH001 1000.0 * METERS, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER STABILITY CLASS INDEX
*
198 M2IBDSTB001 4 * D-STABILITY, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER RAIN RATE
*
199 M2BNDRAN001 5.0 * MM/HR, USER'S GUIDE APPENDIX C
*
* BOUNDARY WEATHER WIND SPEED
*
200 M2BNDWIND001 5.0 * M/S, USER'S GUIDE APPENDIX C
*

* METEOROLOGICAL BIN SAMPLING (M4) DATA

*
* NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
M4NRNINT001 5 * USER'S GUIDE APPENDIX C/NUREG 4551 APPENDIX A
*
* ENDPOINTS OF THE RAIN DISTANCE INTERVALS (KILOMETERS)
*



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X Non-Safety Related	Page	1.5-16 of 1.5-374
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

```

* NOTE: THESE MUST BE CHOSEN TO MATCH THE SPATIAL ENDPOINT DISTANCES
* SPECIFIED FOR ARRAY SPAEND (10 % ERROR IS ALLOWED)
*
*      2.0      5.0      10.0      30.0      50.0      MILES
*
202 M4RNDSTS001  3.22  8.05  16.1  48.3  80.5  *KM
*
* NUMBER OF RAIN INTENSITY BREAKPOINTS
*
203 M4NRINTN001  3      * USER'S GUIDE APPENDIX C
*
* RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
*
204 M4RNRATE001  2.0  4.0  6.0  * USER'S GUIDE APPENDIX C
*
* NUMBER OF WEATHER SAMPLES PER BIN
* USER'S GUIDE APPENDIX C USED 4. MORE SAMPLES ARE PREFERRED, BUT THIS INCREASES
* COMPUTING TIME. USED 12 IN THIS ANALYSIS - MORE ACCURATE WITH REASONABLE RUN TIME
*
205 M4NSMPLS001  12  *4 MINIMUM, 24 MAXIMUM
*
* INITIAL SEED FOR RANDOM NUMBER GENERATOR FOR WEATHER SAMPLING
*
206 M4IRSEED001  79
*****
* RELEASE DATA (2/2)
*****
*
* SOURCE TERM NUMBER 1 OF 10
*****
*
207 RDATNAM2001 'NCL' * SOURCE TITLE
208 RDOALARM001 6.12E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
209 RDNUMREL001 1 * NUMBER OF PLUMES MODELED

```




Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

210 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 211 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 212 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 213 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
 214 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
 215 RDPDELAY001 9.72E+03 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
 * RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 4 Grp. 5 Grp. 6 Grp. 7
 216 RDRELFRC001 4.40E-02 0.0 2.30E-05 2.30E-05 0.0 0.0 0.0

***** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT *****

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ = 515
 NUMBER OF BLANK OR COMMENT RECORDS READ = 298
 NUMBER OF TERMINATOR RECORDS = 1
 NUMBER OF RECORDS PROCESSED = 216
 NUMBER OF PROCESSED RECORDS DUPLICATED = 0
 NUMBER OF PROCESSED RECORDS SORTED = 216

Decay Chain # Ba-139

Decay Chain # Ba-140 La-140

Fraction of Ba-140 going to La-140 in this chain = 1.000000

Decay Chain # Ce-143 Pr-143

Fraction of Ce-143 going to Pr-143 in this chain = 1.000000

Decay Chain # Ce-144

Decay Chain # Cm-242 Pu-238



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.5-18 of 1.5-374

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	Date	
Project	PSEG ESPA	Date	
Proj. No	12380-001	Date	
Equip. No.			

Fraction of Cm-242 going to Pu-238 in this chain = 1.000000

Decay Chain # Cm-244 Pu-240

Fraction of Cm-244 going to Pu-240 in this chain = 1.000000

Decay Chain # Co-58

Decay Chain # Co-60

Decay Chain # Cs-134

Decay Chain # Cs-136

Decay Chain # Cs-137

Decay Chain # I-133 Xe-133

Fraction of I-133 going to Xe-133 in this chain = 0.971000

Decay Chain # I-134

Decay Chain # I-135 Xe-135

Fraction of I-135 going to Xe-135 in this chain = 0.846000

Decay Chain # Kr-85m Kr-85

Fraction of Kr-85m going to Kr-85 in this chain = 0.211000

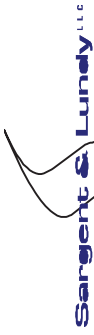
Decay Chain # Kr-87

Decay Chain # Kr-88

Decay Chain # La-141 Ce-141

Fraction of La-141 going to Ce-141 in this chain = 1.000000

Decay Chain # La-142



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-19 of 1.5-374

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

Decay Chain # Mo-99 Tc-99m
 Fraction of Mo-99 going to Tc-99m in this chain = 0.876000

Decay Chain # Nd-147

Decay Chain # Np-239 Pu-239
 Fraction of Np-239 going to Pu-239 in this chain = 1.000000

Decay Chain # Pu-241 Am-241
 Fraction of Pu-241 going to Am-241 in this chain = 1.000000

Decay Chain # Rb-86

Decay Chain # Ru-103

Decay Chain # Ru-105 Rh-105
 Fraction of Ru-105 going to Rh-105 in this chain = 1.000000

Decay Chain # Ru-106

Decay Chain # Sb-127 Te-127
 Fraction of Sb-127 going to Te-127 in this chain = 0.824000

Decay Chain # Sb-127 Te-127m Te-127
 Fraction of Sb-127 going to Te-127m in this chain = 0.176000
 Fraction of Sb-127 going to Te-127 in this chain = 0.171776
 Fraction of Te-127m going to Te-127 in this chain = 0.976000

Decay Chain # Sb-129 Te-129
 Fraction of Sb-129 going to Te-129 in this chain = 0.775000

Decay Chain # Sb-129 Te-129m Te-129
 Fraction of Sb-129 going to Te-129m in this chain = 0.225000
 Fraction of Sb-129 going to Te-129 in this chain = 0.146250
 Fraction of Te-129m going to Te-129 in this chain = 0.650000



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-20 of 1.5-374

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

Decay Chain # Sr-89

Decay Chain # Sr-90 Y-90 in this chain = 1.0000000
 Fraction of Sr-90 going to Y-90

Decay Chain # Sr-91 Y-91 in this chain = 0.4220000
 Fraction of Sr-91 going to Y-91

Decay Chain # Sr-92 Y-92 in this chain = 1.0000000
 Fraction of Sr-92 going to Y-92

Decay Chain # Te-131m I-131 in this chain = 0.7780000
 Fraction of Te-131m going to I-131

Decay Chain # Te-132 I-132 in this chain = 1.0000000
 Fraction of Te-132 going to I-132

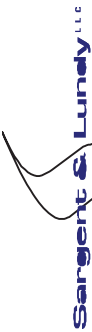
Decay Chain # Y-93

Decay Chain # Zr-95 Nb-95 in this chain = 0.9930000
 Fraction of Zr-95 going to Nb-95

Decay Chain # Zr-97

RELEASED INVENTORY OF ALL PLUMES

Kr-85 2.11E+15
 Kr-85m 1.43E+16
 Kr-87 1.36E+15
 Kr-88 1.96E+16
 Rb-86 1.70E+11
 Sb-127 7.89E+12
 Sb-129 8.59E+12
 Te-127 8.10E+12



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.5-21 of 1.5-374
Non-Safety Related		Prepared by	Date
Client PSEG Nuclear Development		Reviewed by	Date
Project PSEG ESPA		Approved by	Date
Proj. No 12380-001		Equip. No.	

- Te-127m 1.25E+12
- Te-129 1.39E+13
- Te-129m 7.52E+12
- Te-131m 1.14E+13
- Te-132 1.30E+14
- I-131 2.65E+11
- I-132 1.19E+14
- Xe-133 3.71E+17
- Xe-135 2.78E+16
- Cs-134 1.96E+13
- Cs-136 4.24E+12
- Cs-137 1.22E+13

READING FROM A WEATHER FILE WITH THE FOLLOWING HEADER:

SL HC MET 2004 - SHCMET04.inp - Orig: G. Tegarden 7/22/08 Verf: M. Saunders 7/24

DAY HR DRSP S PC - Supporting Calc: SLHC-MET.XLS

METEOROLOGICAL DATA FILE CONTAINS 505 HOURS OF OBSERVED RAIN DATA.

ACCUMULATED RAIN MEASUREMENTS TOTALED 43.71 INCHES FOR THE YEAR.

CONSTANT LID HEIGHTS (M) FOR 4 SEASONS = 1000 1700 1700 1200

NON-ZERO WINDSPEEDS LESS THAN 0.5 M/S ARE SET TO 0.5 M/S

NUMTRI= 390

* * * * * METEOROLOGICAL BIN SUMMARY * * * * *

BIN PRIORITIES

RI XX - RAIN INTENSITY I WITHIN THE INTERVAL ENDING AT XX

INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5 INTERVAL ENDPOINTS ARE 3 8 16 48 80

RAIN INTENSITIES ARE IN MILLIMETERS OF RAIN PER HOUR, THE 3 INTENSITY BREAKPOINTS ARE 2.0 4.0 6.0

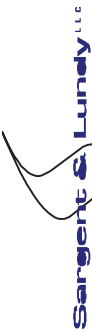
S V - INITIAL WEATHER CONDITIONS WITH STABILITY CLASS S AND WIND SPEED INTERVAL V

STABILITY CLASSES ARE B = A/B, D = C/D, E = E, AND F = F

WIND SPEED INTERVALS ARE IN METERS PER SECOND, 1 (0-1), 2 (1-2), 3 (2-3), 4 (3-5), 5 (5-7), 6 (GT 7)

WIND DIRECTION

METBIN 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 TOTAL PER CENT



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.5-23 of 1.5-374
Non-Safety Related			
Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

37 ALL 0.056 0.059 0.062 0.057 0.058 0.067 0.101 0.069 0.066 0.069 0.067 0.046 0.027 0.028 0.099 0.067 8760



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related		Rev. 2 Date	
X Non-Safety Related		Page 1.5-24 of 1.5-374	
Client PSEG Nuclear Development		Prepared by	
Project PSEG ESPA		Reviewed by	
Proj. No 12380-001		Approved by	
Equip. No.		Date	

* * * * * METEOROLOGICAL BIN SUMMARY * * * * *

BIN PRIORITIES

RI XX - RAIN INTENSITY I WITHIN THE INTERVAL ENDING AT XX
 INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5 INTERVAL ENDPOINTS ARE 3 8 16 48 80
 RAIN INTENSITIES ARE IN MILLIMETERS OF RAIN PER HOUR, THE 3 INTENSITY BREAKPOINTS ARE 2.0 4.0 6.0

S V - INITIAL WEATHER CONDITIONS WITH STABILITY CLASS S AND WIND SPEED INTERVAL V
 STABILITY CLASSES ARE B = A/B, D = C/D, E = E, AND F = F
 WIND SPEED INTERVALS ARE IN METERS PER SECOND (M/S), 1 (0-1), 2 (1-2), 3 (2-3), 4 (3-5), 5 (5-7), 6 (GT 7)

METBIN	WIND DIRECTION																TOTAL	PER CENT	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
1 B	3	5	0	7	1	3	2	0	1	1	0	0	1	2	0	3	26	0.2968	
2 B	4	2	2	11	20	35	37	98	62	25	16	8	1	6	6	40	33	402	4.5890
3 D	1	0	1	2	0	0	2	1	3	3	7	4	3	4	1	0	2	33	0.3767
4 D	2	24	25	18	16	18	22	21	25	25	29	23	21	13	10	11	26	327	3.7329
5 D	3	57	51	79	44	46	37	37	46	47	36	33	36	31	14	27	48	669	7.6370
6 D	4	97	94	92	74	99	79	124	99	64	124	111	28	5	22	65	102	1279	14.6005
7 D	5	66	57	25	25	55	109	144	47	53	35	20	4	0	9	90	65	804	9.1781
8 D	6	4	2	3	2	9	56	68	27	4	3	2	0	0	2	72	23	277	3.1621
9 E	1	3	5	2	1	8	8	7	4	8	10	7	10	7	5	3	4	92	1.0502
10 E	2	16	21	24	29	27	26	33	29	27	42	40	41	46	14	15	25	455	5.1941
11 E	3	28	33	69	60	46	50	77	55	55	51	53	27	14	26	28	28	700	7.9909
12 E	4	85	123	80	109	98	102	176	107	129	57	26	8	3	28	139	64	1334	15.2283
13 F	1	4	1	3	1	3	5	2	1	1	6	2	6	2	6	5	0	48	0.5479
14 F	2	13	12	12	12	12	9	6	7	22	24	23	21	25	11	16	12	237	2.7055
15 F	3	7	7	22	14	9	11	22	23	36	23	37	10	2	19	55	15	312	3.5616
16 F	4	6	14	19	28	9	6	22	21	22	19	11	1	0	1	132	22	333	3.8014
17 R1	3	11	12	12	9	16	12	11	16	26	39	55	51	24	15	30	24	363	4.1438
18 R1	8	1	0	0	3	1	2	2	2	2	2	5	7	8	1	3	3	42	0.4795
19 R1	16	3	5	6	10	3	2	2	5	3	8	18	17	5	4	4	5	100	1.1416
20 R1	48	19	16	21	23	5	7	17	10	7	26	49	47	17	18	26	25	333	3.8014
21 R1	80	15	19	19	8	6	1	7	8	11	22	32	23	11	16	27	27	252	2.8767
22 R2	3	4	0	0	3	1	1	4	2	2	12	13	8	3	4	13	6	76	0.8676



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

* * * * * BIN WINDROSE SUMMARY * * * * *

DIRECTION

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TOTAL	1.000000	0.000	0.269	0.038	0.115	0.077	0.000	0.038	0.038	0.000	0.000	0.000	0.038	0.077	0.000	0.115
1.000000	0.005	0.005	0.027	0.050	0.087	0.092	0.244	0.154	0.062	0.040	0.020	0.002	0.015	0.015	0.100	0.082
1.000000	0.000	0.030	0.061	0.000	0.000	0.061	0.030	0.091	0.091	0.212	0.121	0.091	0.121	0.030	0.000	0.061
1.000000	0.073	0.076	0.055	0.049	0.055	0.067	0.064	0.076	0.076	0.089	0.070	0.064	0.040	0.031	0.034	0.080
1.000000	0.085	0.076	0.118	0.066	0.069	0.055	0.055	0.069	0.070	0.054	0.049	0.054	0.046	0.021	0.040	0.072
1.000000	0.076	0.073	0.072	0.058	0.077	0.062	0.097	0.077	0.050	0.097	0.087	0.022	0.004	0.017	0.051	0.080
1.000000	0.082	0.071	0.031	0.031	0.068	0.136	0.179	0.058	0.066	0.044	0.025	0.005	0.000	0.011	0.112	0.081
1.000000	0.014	0.007	0.011	0.007	0.032	0.202	0.245	0.097	0.014	0.011	0.007	0.000	0.000	0.007	0.260	0.083
1.000000	0.033	0.054	0.022	0.011	0.087	0.087	0.076	0.043	0.087	0.109	0.076	0.109	0.076	0.054	0.033	0.043
1.000000	0.035	0.046	0.053	0.064	0.059	0.057	0.073	0.064	0.059	0.092	0.088	0.090	0.101	0.031	0.033	0.055
1.000000	0.040	0.047	0.099	0.086	0.066	0.071	0.110	0.079	0.079	0.073	0.076	0.039	0.020	0.037	0.040	0.040
1.000000	0.064	0.092	0.060	0.082	0.073	0.076	0.132	0.080	0.097	0.043	0.019	0.006	0.002	0.021	0.104	0.048
1.000000	0.083	0.021	0.063	0.021	0.063	0.104	0.042	0.021	0.021	0.125	0.042	0.125	0.042	0.125	0.104	0.000
1.000000	0.055	0.051	0.051	0.051	0.051	0.038	0.025	0.030	0.093	0.101	0.097	0.089	0.105	0.046	0.068	0.051
1.000000	0.022	0.022	0.071	0.045	0.029	0.035	0.071	0.074	0.115	0.074	0.119	0.032	0.006	0.061	0.176	0.048



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date

33	0.052	0.050	0.052	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000																
34	0.052	0.050	0.052	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000																
35	0.052	0.050	0.052	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000																
36	0.052	0.050	0.052	0.043	0.022	0.020	0.036	0.035	0.038	0.084	0.133	0.129	0.057	0.050	0.117	0.083
1.000000																
37	0.056	0.059	0.062	0.057	0.058	0.067	0.101	0.069	0.066	0.069	0.067	0.046	0.027	0.028	0.099	0.067
1.000000																

***** BEGINNING OF CHANGE CASE 1 USER INPUT *****
 ***** SOURCE TERM NUMBER 2 OF 10 *****

 * SOURCE TERM NUMBER 2 OF 10

 *

 217 RDATNAM2001 'Case 1' * SOURCE TITLE
 ***** RECORD NUMBER 217 REPLACES RECORD NUMBER 207 *****
 218 RDOALARM001 6.91E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 ***** RECORD NUMBER 218 REPLACES RECORD NUMBER 208 *****
 219 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 ***** RECORD NUMBER 219 REPLACES RECORD NUMBER 209 *****
 220 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 ***** RECORD NUMBER 220 REPLACES RECORD NUMBER 210 *****
 221 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 ***** RECORD NUMBER 221 REPLACES RECORD NUMBER 211 *****
 222 RDPHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 ***** RECORD NUMBER 222 REPLACES RECORD NUMBER 212 *****
 223 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
 ***** RECORD NUMBER 223 REPLACES RECORD NUMBER 213 *****
 224 RDPLDUR001 3.60E+03 * DURATION OF PLUMES
 ***** RECORD NUMBER 224 REPLACES RECORD NUMBER 214 *****
 225 RDPDELAY001 7.20E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
 ***** RECORD NUMBER 225 REPLACES RECORD NUMBER 215 *****



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
 226 RDRELFRC001 1.00E+00 0.0 1.50E-07 1.30E-05 0.0 0.0 0.0
 ***** RECORD NUMBER 226 REPLACES RECORD NUMBER 216 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 1 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 1
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

Kr-85 4.80E+16
 Kr-85m 4.49E+16
 Kr-87 2.88E+13
 Kr-88 1.96E+16
 Rb-86 1.09E+09
 Sb-127 4.05E+12
 Sb-129 6.23E+11
 Te-127 4.32E+12
 Te-127m 7.06E+11
 Te-129 3.40E+12
 Te-129m 4.21E+12
 Te-131m 4.80E+12
 Te-132 6.54E+13
 I-131 3.38E+11
 I-132 6.72E+13
 Xe-133 7.85E+18
 Xe-135 2.38E+17
 Cs-134 1.28E+11
 Cs-136 2.69E+10
 Cs-137 7.93E+10



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-30 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date
Equip. No.		

```

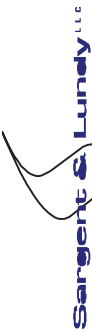
***** BEGINNING OF CHANGE CASE 2 USER INPUT *****
***** SOURCE TERM NUMBER 3 OF 10 *****
*****
227 RDATNAM2001 'Case 2' * SOURCE TITLE
***** RECORD NUMBER 227 REPLACES RECORD NUMBER 207 *****
228 RDOALARM001 6.55E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 228 REPLACES RECORD NUMBER 208 *****
229 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 229 REPLACES RECORD NUMBER 209 *****
230 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 230 REPLACES RECORD NUMBER 210 *****
231 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 231 REPLACES RECORD NUMBER 211 *****
232 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 232 REPLACES RECORD NUMBER 212 *****
233 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 233 REPLACES RECORD NUMBER 213 *****
234 RDPLUDUR001 3.60E+03 * DURATION OF PLUMES
***** RECORD NUMBER 234 REPLACES RECORD NUMBER 214 *****
235 RDPDELAY001 6.84E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
***** RECORD NUMBER 235 REPLACES RECORD NUMBER 215 *****
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
236 RDRELFRC001 1.00E+0 0.0 5.00E-06 5.00E-06 0.0 0.0 0.0
***** RECORD NUMBER 236 REPLACES RECORD NUMBER 216 *****
***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 2 USER INPUT *****

```

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 2
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X Non-Safety Related	Page	1.5-31 of 1.5-374
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

RELEASED INVENTORY OF ALL PLUMES

Kr-85 4.80E+16
 Kr-85m 5.24E+16
 Kr-87 4.97E+13
 Kr-88 2.50E+16
 Rb-86 3.62E+10
 Sb-127 1.57E+12
 Sb-129 2.81E+11
 Te-127 1.67E+12
 Te-127m 2.71E+11
 Te-129 1.35E+12
 Te-129m 1.62E+12
 Te-131m 1.89E+12
 Te-132 2.54E+13
 I-131 1.25E+11
 I-132 2.61E+13
 Xe-133 7.90E+18
 Xe-135 2.57E+17
 Cs-134 4.26E+12
 Cs-136 8.99E+11
 Cs-137 2.64E+12

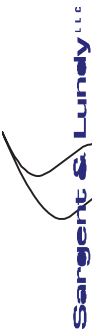
***** BEGINNING OF CHANGE CASE 3 USER INPUT *****

***** SOURCE TERM NUMBER 4 OF 10 *****

237 RDATNAM2001 'Case 3' * SOURCE TITLE

***** RECORD NUMBER 237 REPLACES RECORD NUMBER 207 *****

238 RDOALARM001 1.77E+05 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-32 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date
Equip. No.		

```

***** RECORD NUMBER 238 REPLACES RECORD NUMBER 208 *****
239 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 239 REPLACES RECORD NUMBER 209 *****
240 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 240 REPLACES RECORD NUMBER 210 *****
241 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 241 REPLACES RECORD NUMBER 211 *****
242 RDPHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 242 REPLACES RECORD NUMBER 212 *****
243 RDPWHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 243 REPLACES RECORD NUMBER 213 *****
244 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
***** RECORD NUMBER 244 REPLACES RECORD NUMBER 214 *****
245 RDPDELAY001 1.80E+05 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
***** RECORD NUMBER 245 REPLACES RECORD NUMBER 215 *****
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
246 RDRELFRC001 1.00E+0 0.0 2.80E-04 2.20E-03 0.0 0.0 0.0
***** RECORD NUMBER 246 REPLACES RECORD NUMBER 216 *****

```

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 3 USER INPUT *****

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 3
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0

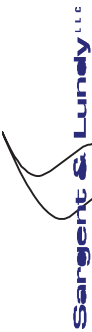
```

RELEASED INVENTORY OF ALL PLUMES

```

Kr-85 4.80E+16
Kr-85m 2.16E+14
Kr-87 1.96E+05
Kr-88 4.31E+12
Rb-86 1.92E+12

```

Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.5-33 of 1.5-374

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

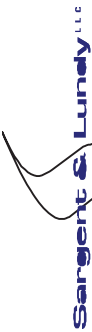
- Sb-127 5.29E+14
- Sb-129 4.16E+11
- Te-127 6.01E+14
- Te-127m 1.19E+14
- Te-129 4.50E+14
- Te-129m 6.91E+14
- Te-131m 3.66E+14
- Te-132 8.15E+15
- I-131 1.01E+14
- I-132 8.40E+15
- Xe-133 6.50E+18
- Xe-135 1.72E+16
- Cs-134 2.38E+14
- Cs-136 4.65E+13
- Cs-137 1.48E+14

***** BEGINNING OF CHANGE CASE 4 USER INPUT *****

***** SOURCE TERM NUMBER 5 OF 10 *****

```

247 RDATNAM2001 'Case 4' * SOURCE TITLE
***** RECORD NUMBER 247 REPLACES RECORD NUMBER 207 *****
248 RDOALARM001 6.91E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 248 REPLACES RECORD NUMBER 208 *****
249 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 249 REPLACES RECORD NUMBER 209 *****
250 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 250 REPLACES RECORD NUMBER 210 *****
251 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 251 REPLACES RECORD NUMBER 211 *****
252 RDPHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 252 REPLACES RECORD NUMBER 212 *****
253 RDPWHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
  
```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

***** RECORD NUMBER 253 REPLACES RECORD NUMBER 213 *****
254 RDPLUDUR001 3.60E+03 * DURATION OF PLUMES
***** RECORD NUMBER 254 REPLACES RECORD NUMBER 214 *****
255 RDPDELAY001 7.20E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
***** RECORD NUMBER 255 REPLACES RECORD NUMBER 215 *****
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
256 RDRELFRC001 1.00E+0 0.0 1.60E-03 1.60E-03 0.0 0.0 0.0
***** RECORD NUMBER 256 REPLACES RECORD NUMBER 216 *****

```

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 4 USER INPUT *****

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 4
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0
*****

```

```

RELEASED INVENTORY OF ALL PLUMES
Kr-85 4.80E+16
Kr-85m 4.49E+16
Kr-87 2.88E+13
Kr-88 1.96E+16
Rb-86 1.16E+13
Sb-127 4.99E+14
Sb-129 7.67E+13
Te-127 5.32E+14
Te-127m 8.69E+13
Te-129 4.18E+14
Te-129m 5.18E+14
Te-131m 5.91E+14
Te-132 8.05E+15
I-131 4.16E+13
I-132 8.27E+15

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-35 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

Xe-133 7.85E+18
 Xe-135 2.38E+17
 Cs-134 1.36E+15
 Cs-136 2.87E+14
 Cs-137 8.46E+14

***** BEGINNING OF CHANGE CASE 5 USER INPUT *****

 * SOURCE TERM NUMBER 6 OF 10

*

 257 RDATNAM2001 'Case 5' * SOURCE TITLE
 ***** RECORD NUMBER 257 REPLACES RECORD NUMBER 207 *****
 258 RDOALARM001 6.55E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
 ***** RECORD NUMBER 258 REPLACES RECORD NUMBER 208 *****
 259 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
 ***** RECORD NUMBER 259 REPLACES RECORD NUMBER 209 *****
 260 RDMAXRIS001 1 * RISK-DOMINANT PLUME
 ***** RECORD NUMBER 260 REPLACES RECORD NUMBER 210 *****
 261 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
 ***** RECORD NUMBER 261 REPLACES RECORD NUMBER 211 *****
 262 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
 ***** RECORD NUMBER 262 REPLACES RECORD NUMBER 212 *****
 263 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
 ***** RECORD NUMBER 263 REPLACES RECORD NUMBER 213 *****
 264 RDPLUDUR001 3.60E+03 * DURATION OF PLUMES
 ***** RECORD NUMBER 264 REPLACES RECORD NUMBER 214 *****
 265 RDPDELAY001 6.84E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
 ***** RECORD NUMBER 265 REPLACES RECORD NUMBER 215 *****
 * RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
 266 RDRELFRC001 1.00E+0 0.0 6.00E-03 5.30E-04 0.0 0.0 0.0
 ***** RECORD NUMBER 266 REPLACES RECORD NUMBER 216 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 5 USER INPUT *****



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

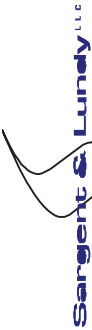
USER INPUT PROCESSING SUMMARY - CHANGE CASE 5
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

- Kr-85 4.80E+16
- Kr-85m 5.24E+16
- Kr-87 4.97E+13
- Kr-88 2.50E+16
- Rb-86 4.35E+13
- Sb-127 1.66E+14
- Sb-129 2.98E+13
- Te-127 1.77E+14
- Te-127m 2.88E+13
- Te-129 1.43E+14
- Te-129m 1.72E+14
- Te-131m 2.00E+14
- Te-132 2.69E+15
- I-131 1.33E+13
- I-132 2.76E+15
- Xe-133 7.90E+18
- Xe-135 2.57E+17
- Cs-134 5.11E+15
- Cs-136 1.08E+15
- Cs-137 3.17E+15

***** BEGINNING OF CHANGE CASE 6 USER INPUT *****

* SOURCE TERM NUMBER 7 OF 10



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-37 of 1.5-374

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related
Project	PSEG ESPA	Prepared by		Date
Proj. No	12380-001	Reviewed by		Date
	Equip. No.	Approved by		Date

*

```

267 RDATNAM2001 'Case 6' * SOURCE TITLE
***** RECORD NUMBER 267 REPLACES RECORD NUMBER 207 *****
268 RDOALARM001 6.55E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 268 REPLACES RECORD NUMBER 208 *****
269 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 269 REPLACES RECORD NUMBER 209 *****
270 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 270 REPLACES RECORD NUMBER 210 *****
271 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 271 REPLACES RECORD NUMBER 211 *****
272 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 272 REPLACES RECORD NUMBER 212 *****
273 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 273 REPLACES RECORD NUMBER 213 *****
274 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
***** RECORD NUMBER 274 REPLACES RECORD NUMBER 214 *****
275 RDPDELAY001 6.84E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
***** RECORD NUMBER 275 REPLACES RECORD NUMBER 215 *****
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
276 RDRELFRC001 1.00E+0 0.0 3.10E-02 7.70E-02 0.0 0.0 0.0
***** RECORD NUMBER 276 REPLACES RECORD NUMBER 216 *****

```

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 6 USER INPUT *****

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 6
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-38 of 1.5-374

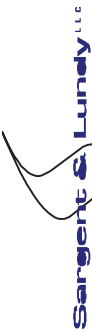
Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

Kr-85	4.80E+16
Kr-85m	2.61E+16
Kr-87	4.28E+12
Kr-88	8.32E+15
Rb-86	2.23E+14
Sb-127	2.34E+16
Sb-129	2.10E+15
Te-127	2.52E+16
Te-127m	4.18E+15
Te-129	1.84E+16
Te-129m	2.48E+16
Te-131m	2.62E+16
Te-132	3.76E+17
I-131	2.24E+15
I-132	3.87E+17
Xe-133	7.70E+18
Xe-135	1.82E+17
Cs-134	2.64E+16
Cs-136	5.52E+15
CS-137	1.64E+16

```

***** BEGINNING OF CHANGE CASE 7 USER INPUT *****
***** SOURCE TERM NUMBER 8 OF 10 *****
***** RDATNAM2001 'Case 7' * SOURCE TITLE *
***** RECORD NUMBER 277 REPLACES RECORD NUMBER 207 *****
278 RDOALARM001 6.91E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 278 REPLACES RECORD NUMBER 208 *****
279 RDNUNREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 279 REPLACES RECORD NUMBER 209 *****
280 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 280 REPLACES RECORD NUMBER 210 *****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE

ANALYSIS FOR PSEG ESPA

Calc No.	2009-11222	
Rev.	2	Date
Page	1.5-39	of 1.5-374

Safety Related Non-Safety Related

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

```

281 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 281 REPLACES RECORD NUMBER 211 *****
282 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 282 REPLACES RECORD NUMBER 212 *****
283 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 283 REPLACES RECORD NUMBER 213 *****
284 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
***** RECORD NUMBER 284 REPLACES RECORD NUMBER 214 *****
285 RDPDELAY001 7.20E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
***** RECORD NUMBER 285 REPLACES RECORD NUMBER 215 *****
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
286 RDRELFRC001 1.00E+0 0.0 8.90E-02 9.90E-02 0.0 0.0 0.0
***** RECORD NUMBER 286 REPLACES RECORD NUMBER 216 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 7 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 7
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0
*****

```

RELEASED INVENTORY OF ALL PLUMES

```

Kr-85 4.80E+16
Kr-85m 2.24E+16
Kr-87 2.48E+12
Kr-88 6.52E+15
Rb-86 6.40E+14
Sb-127 2.98E+16
Sb-129 2.30E+15
Te-127 3.22E+16
Te-127m 5.37E+15
Te-129 2.32E+16

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-40 of 1.5-374

Client PSEG Nuclear Development	Safety Related	Non-Safety Related
Project PSEG ESPA	X	
Proj. No 12380-001	Equip. No.	

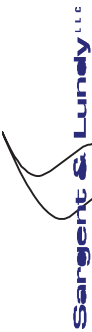
Prepared by	Date
Reviewed by	Date
Approved by	Date

Te-129m 3.19E+16
 Te-131m 3.29E+16
 Te-132 4.79E+17
 I-131 2.97E+15
 I-132 4.93E+17
 Xe-133 7.66E+18
 Xe-135 1.69E+17
 Cs-134 7.58E+16
 Cs-136 1.58E+16
 Cs-137 4.71E+16

```

***** BEGINNING OF CHANGE CASE 8 USER INPUT *****
***** SOURCE TERM NUMBER 9 OF 10 *****
*****
287 RDATNAM2001 'Case 8' * SOURCE TITLE
***** RECORD NUMBER 287 REPLACES RECORD NUMBER 207 *****
288 RDOALARM001 4.32E+03 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 288 REPLACES RECORD NUMBER 208 *****
289 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 289 REPLACES RECORD NUMBER 209 *****
290 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 290 REPLACES RECORD NUMBER 210 *****
291 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 291 REPLACES RECORD NUMBER 211 *****
292 RDPHEAT001 4.18E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 292 REPLACES RECORD NUMBER 212 *****
293 RDPWHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 293 REPLACES RECORD NUMBER 213 *****
294 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
***** RECORD NUMBER 294 REPLACES RECORD NUMBER 214 *****
295 RDPDELAY001 7.20E+03 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
***** RECORD NUMBER 295 REPLACES RECORD NUMBER 215 *****

```

Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
 296 RDRELFRC001 1.00E+0 0.0 1.90E-01 2.50E-01 0.0 0.0 0.0
 ***** RECORD NUMBER 296 REPLACES RECORD NUMBER 216 *****

***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 8 USER INPUT *****

USER INPUT PROCESSING SUMMARY - CHANGE CASE 8
 NUMBER OF RECORDS CHANGED = 10
 NUMBER OF RECORDS ADDED = 0

RELEASED INVENTORY OF ALL PLUMES

Kr-85 4.80E+16
 Kr-85m 3.63E+17
 Kr-87 4.53E+16
 Kr-88 5.27E+17
 Rb-86 1.40E+15
 Sb-127 8.62E+16
 Sb-129 1.05E+17
 Te-127 8.82E+16
 Te-127m 1.36E+16
 Te-129 1.63E+17
 Te-129m 8.17E+16
 Te-131m 1.26E+17
 Te-132 1.42E+18
 I-131 2.64E+15
 I-132 1.27E+18
 Xe-133 8.46E+18
 Xe-135 6.67E+17
 Cs-134 1.62E+17
 Cs-136 3.51E+16
 Cs-137 1.00E+17



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-42 of 1.5-374

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

```

***** BEGINNING OF CHANGE CASE 9 USER INPUT *****
***** SOURCE TERM NUMBER 10 OF 10 *****
*****
397 RDATNAM2001 'Case 9' * SOURCE TITLE
***** RECORD NUMBER 297 REPLACES RECORD NUMBER 207 *****
298 RDOALARM001 4.39E+04 * TIME AFTER ACCIDENT INITIATION THAT OFF-SITE ALARM IS INITIATED
***** RECORD NUMBER 298 REPLACES RECORD NUMBER 208 *****
299 RDNUMREL001 1 * NUMBER OF PLUMES MODELED
***** RECORD NUMBER 299 REPLACES RECORD NUMBER 209 *****
300 RDMAXRIS001 1 * RISK-DOMINANT PLUME
***** RECORD NUMBER 300 REPLACES RECORD NUMBER 210 *****
301 RDREFTIM001 0.5 * REPRESENTATIVE TIME POINT FOR DISPERSION
***** RECORD NUMBER 301 REPLACES RECORD NUMBER 211 *****
302 RDPLHEAT001 1.38E+06 * HEAT CONTENT OF THE RELEASE SEGMENTS (WATTS)
***** RECORD NUMBER 302 REPLACES RECORD NUMBER 212 *****
303 RDPLHITE001 37.0 * RELEASE HEIGHT OF EACH PLUME (METERS)
***** RECORD NUMBER 303 REPLACES RECORD NUMBER 213 *****
304 RDPLUDUR001 3.60E+04 * DURATION OF PLUMES
***** RECORD NUMBER 304 REPLACES RECORD NUMBER 214 *****
305 RDPDELAY001 8.50E+04 * TIME OF RLS FOR EACH PLM (S FROM SCRAM)
***** RECORD NUMBER 305 REPLACES RECORD NUMBER 215 *****
* RELEASE F. Grp. 1 Grp. 2 Grp. 3 Grp. 4 Grp. 5 Grp. 6 Grp. 7
306 RDRELFRC001 1.00E+0 0.0 3.70E-01 3.60E-01 0.0 0.0 0.0
***** RECORD NUMBER 306 REPLACES RECORD NUMBER 216 *****

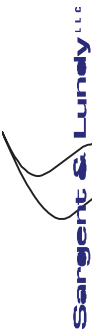
***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 9 USER INPUT *****

```

```

USER INPUT PROCESSING SUMMARY - CHANGE CASE 9
NUMBER OF RECORDS CHANGED = 10
NUMBER OF RECORDS ADDED = 0
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

RELEASED INVENTORY OF ALL PLUMES

Kr-85 4.80E+16
 Kr-85m 1.28E+16
 Kr-87 3.47E+11
 Kr-88 2.70E+15
 Rb-86 2.64E+15
 Sb-127 1.06E+17
 Sb-129 4.69E+15
 Te-127 1.15E+17
 Te-127m 1.95E+16
 Te-129 8.03E+16
 Te-129m 1.16E+17
 Te-131m 1.10E+17
 Te-132 1.69E+18
 I-131 1.18E+16
 I-132 1.74E+18
 Xe-133 7.51E+18
 Xe-135 1.28E+17
 Cs-134 3.15E+17
 Cs-136 6.52E+16
 Cs-137 1.96E+17

USER INPUT IS READ FROM UNIT 25
 RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.
 THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
 THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

RECORD NUMBER RECORD

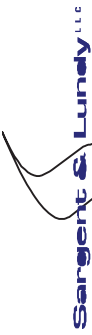


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*****
* FILE NAME: E.2.INP
*
* Sargent & Lundy (10/2009)
*
*****
* DOSE CONVERSION FILE DATA
*****
*DOSE CONVERSION FACTOR FILENAME
1 DCF_FILE001 'C:\MACCS2\DOSDATA.INP'
*
*****
* MISCELLANEOUS DATA
*****
2 DESCRIPTIVE TITLE DESCRIBING THIS "EARLY" INPUT FILE
*
3 MIEANAM1001 'GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS '
*
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
* FALSE ASSIGNED BECAUSE CHRONC IS TO BE RUN AFTER EARLY
*
4 MIENDAT2001 .FALSE.
*
* DISPERSION MODEL OPTION CODE:
* USER'S GUIDE APPENDIC C/NUREG 4551 APPENDIX A
* 1 * STRAIGHT LINE
* 2 * WIND-SHIFT WITH ROTATION
* 3 * WIND-SHIFT WITHOUT ROTATION
*
5 MIIPLUME001 2
*
* NUMBER OF FINE GRID SUBDIVISIONS USED BY THE MODEL
* 3, 5 OR 7 ALLOWED
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

6 MINUMFIN001 7
*
* LEVEL OF DEBUG OUTPUT REQUIRED, NORMAL RUNS SHOULD SPECIFY ZERO (MINIMUM DEBUG OUTPUT)
*
7 MIIPRINT001 0
*
* LOGICAL FLAG SIGNIFYING THAT THE RISK CONTRIBUTION TABLES ARE NOT TO BE PRINTED
*
* RISBIN
*
8 MIRISCAT001 .FALSE.
*
* FLAG INDICATING WIND-ROSES FROM ATMOS ARE TO USED
*
9 MIOVRRID001 .FALSE.
*
*****
* ORGAN DEFINITION (OD) DATA
*****
*
* ORGANS TO BE USED FOR HEALTH EFFECTS
*
*
* ORGNAM ORGFLG
*
10 MIORGDEF001 'A-SKIN' .TRUE.
11 MIORGDEF002 'A-RED MARR' .TRUE.
12 MIORGDEF003 'A-LUNGS' .TRUE.
13 MIORGDEF004 'A-THYROIDH' .TRUE.
14 MIORGDEF005 'A-STOMACH' .TRUE.
15 MIORGDEF006 'A-LOWER LI' .TRUE.
16 MIORGDEF007 'L-EDEWBODY' .TRUE.
17 MIORGDEF008 'L-RED MARR' .TRUE.
18 MIORGDEF009 'L-BONE SUR' .TRUE.
19 MIORGDEF010 'L-BREAST' .TRUE.
20 MIORGDEF011 'L-LUNGS' .TRUE.
21 MIORGDEF012 'L-THYROID' .TRUE.

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.5-46 of 1.5-374

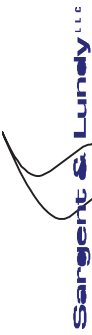
Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

```

22 MIORGDEF013 'L-LOWER LI' .TRUE.
23 MIORGDEF014 'L-BLAD WAL' .TRUE.
24 MIORGDEF015 'L-LIVER' .TRUE.
25 MIORGDEF016 'L-THYROIDH' .TRUE.
*
*****
* POPULATION DISTRIBUTION (PD) DATA
*****
* FLAG INDICATES THAT THE POPULATION DATA IS PROVIDED IN A SEPARATE FILE
*
26 PDPOPF01G001 FILE
*
*****
* SHIELDING AND EXPOSURE (SE) DATA
*****
*
* THREE VALUES OF EACH PROTECTION FACTOR ARE SUPPLIED,
* ONE FOR EACH TYPE OF ACTIVITY:
*
* ACTIVITY TYPE:
* 1 - EVACUEES WHILE MOVING
* 2 - NORMAL ACTIVITY IN SHELTERING AND EVACUATION ZONE
* 3 - SHELTERED ACTIVITY
*
* CLOUD SHIELDING FACTORS
*
* EVACUEES NORMAL SHELTER
27 SECSFACT001 1. 0.75 0.6
*
* PROTECTION FACTORS FOR INHALATION
*
* EVACUEES NORMAL SHELTER
28 SEPROTIN001 1. 0.41 0.33
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.5-47 of 1.5-374

Safety Related	X	Non-Safety Related
Prepared by		Date
Reviewed by		Date
Approved by		Date

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

```

* BREATHING RATES (CUBIC METERS PER SECOND)
*
* EVACUEES NORMAL SHELTER
29 SEBRRATE001 2.66E-4 2.66E-4 2.66E-4
*
* SKIN PROTECTION FACTORS
*
* EVACUEES NORMAL SHELTER
30 SESKPFAC001 1.0 0.41 0.33
*
* GROUND SHIELDING FACTORS
*
* EVACUEES NORMAL SHELTER
31 SEGSHFAC001 0.5 0.33 0.2
*
* RESUSPENSION INHALATION MODEL CONCENTRATION COEFFICIENT (SEC/METER)
*
32 SERESCON001 1.E-4
*
* RESUSPENSION CONCENTRATION COEFFICIENT HALF-LIFE (SEC)
*
33 SERESHAF001 1.82E5
*
*****
* EVACUATION ZONE DATA BLOCK
*****
*
* SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
*
34 EZEANAM2001 '95% EVACUATION'
*
* THE TYPE OF WEIGHTING TO BE APPLIED TO THE EMERGENCY RESPONSE SCENARIOS
* (A VALUE OF 'TIME' OR 'PEOPLE')
*
35 EZWTNAME001 'PEOPLE'

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* * WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO

* * 95% OF PEOPLE EVACUATED

36 EZWTFRAC001 0.95

* * LAST RING IN THE MOVEMENT ZONE

* * (RING 6 CORRESPONDS TO 60 MILES - NO EXPOSURE AFTER TRAVELING TO 10 MILES)

37 EZLASM0V001 6

* * FLAG DEFINING THE TIME AT WHICH EVACUEES "ENTER" THE DESTINATION ELEMENT

38 TRAVELPOINT 'BOUNDARY'

* * RADIAL EVACUATION SPEED (M/S), SPEED TO EXIT EPZ ONCE TRAVEL BEGINS

* * 95 MIN TRAVEL TIME TO CLEAR EPZ (10 MILES)

39 EZESPEED001 2.8 2.8 2.8

* * EVACUATION IS BASED ON A RADIAL EVACUATION

40 EZEVALYP001 'RADIAL'

* *THE DURATION (SECONDS) OF THE EARLY PHASE OF EVACUATION (1440 HOURS)

41 EZDURBEG001 86400.0

* *THE DURATION (SECONDS) OF THE MIDDLE PHASE OF EVACUATION

42 EZDURMID001 0.0

* * CONTROL FLAG INDICATING THAT THE INITIATION OF SHELTERING AND

* * EVACUATION ACTIONS WILL OCCUR AT THE OFF-SITE ALARM TIME (ATMOS INPUT VARIABLE)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.5-49 of 1.5-374

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

43 EZREFPNT001 'ALARM'

* THE NUMBER OF CONCENTRIC RINGS IN WHICH EVACUATION AND/OR SHELTERING CAN OCCUR FOR

* THE RESIDENT POPULATION

44 EZNUMEVA001 6

* FOR EACH DISTANCE RING IN THE SHELTER/EVACUATION REGION - THE DELAY TO TAKE SHELTER

* (SECONDS) FOR RESIDENT INDIVIDUALS (65 MIN DELAY)

45 EZDLTSHL001 3900. 3900. 3900. 3900. 3900.

* DELAY FROM SHELTER TO EVAC

46 EZDLTEVA001 0. 0. 0. 0. 0.

* SHELTER AND RELOCATION (SR) ZONE DATA

* DURATION OF THE EMERGENCY PHASE (SECONDS FROM PLUME ARRIVAL)

* (ONE WEEK)

47 SRENDEMP001 604800.

* CRITICAL ORGAN FOR RELOCATION DECISIONS

* NUREGR 4551, APPENDIX A and HC ER

* EDEWBODY - EFFECTIVE WHOLE-BODY DOSE EQUIVALENT

48 SRCRIORG001 'L-EDEWBODY'

* HOT SPOT RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)

* ONE-HALF DAY, NUREGR 4551, APPENDIX A

49 SRTIMHOT001 43200.



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.5-50 of 1.5-374
Non-Safety Related		Prepared by	Date
		Reviewed by	Date
		Approved by	Date
Client PSEG Nuclear Development			
Project PSEG ESPA			
Proj. No	12380-001	Equip. No.	

*
 * NORMAL RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
 * ONE DAY, NUREGR 4551, APPENDIX A and HC ER
 *
 50 SRTIMNRM001 86400.
 *
 * HOT SPOT RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
 * (1 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)
 * HC ER
 *
 51 SRDOSHOT001 0.01
 *
 * NORMAL RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
 * (1 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)
 * HC ER
 *
 52 SRDOSNRM001 0.01
 *

 * EARLY FATALITY (DF) DATA

 *
 * NUMBER OF EARLY FATALITY EFFECTS
 * HC ER
 *
 53 EFNUMEFA001 3
 *
 * ORGNAM EFFACA EFFACB EFFTHR
 *
 54 EFATAGRP001 'A-RED MARR' 3.8 5.0 1.5
 55 EFATAGRP002 'A-LUNGS' 10.0 7.0 5.0
 56 EFATAGRP003 'A-LOWER LI' 15.0 10.0 8.0
 *

 * EARLY INJURY MODEL PARAMETERS *****



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* NUMBER OF EARLY INJURY EFFECTS

57 EINUMEIN001 0

* LATENT CANCER (LC) PARAMETERS

* NUMBER OF LATENT CANCER EFFECTS

58 LCNUMACA001 7

* THRESHOLD DOSE FOR APPLYING THE DOSE DEPENDENT REDUCTION FACTOR

59 LCDDTHRE001 0.2 (20 REM, BELOW WHICH DDREFA WILL BE APPLIED)

* DOSE THRESHOLD FOR LINEAR DOSE RESPONSE (SV)

* LINEAR MODEL (QUADRATIC MODEL IS NOT BEING USED)

60 LCACTHRE001 0.0

* ACNAME ORGNAM ACSUSC DOSEFA DOSEFB CFRISK CIRISK DDREFA

61	LCANCERS001	'LEUKEMIA'	1.0	1.0	0.0	9.70E-3	0.0	2.0
62	LCANCERS002	'BONE'	1.0	1.0	0.0	1.20E-4	0.0	2.0
63	LCANCERS003	'BREAST'	1.0	1.0	0.0	5.40E-3	1.7E-2	1.0
64	LCANCERS004	'LUNG'	1.0	1.0	0.0	1.55E-2	0.0	2.0
65	LCANCERS005	'THYROID'	1.0	1.0	0.0	7.20E-4	7.2E-3	1.0
66	LCANCERS006	'GI'	1.0	1.0	0.0	3.36E-2	0.0	2.0
67	LCANCERS007	'OTHER'	1.0	1.0	0.0	2.76E-2	0.0	2.0

* RESULT 1 - TOTAL NUMBER OF A GIVEN EFFECT (LATENT CANCER, EARLY DEATH)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
68 TYPE1NUMBER 5
*
* NAME I1DIS1 I2DIS1
*
69 TYPE1OUT001 'CAN FAT/TOTAL' 1 10 * 0 to 50 miles
70 TYPE1OUT002 'CAN FAT/TOTAL' 1 6 * 0 to 10 miles
71 TYPE1OUT003 'ERL FAT/TOTAL' 1 10 * 0 to 50 miles
72 TYPE1OUT004 'ERL FAT/TOTAL' 1 2 * 0 to 2 miles
73 TYPE1OUT005 'ERL FAT/TOTAL' 1 1 * 0 to 1 miles
*
*****
* RESULT 2 - FURTHEST DISTANCE AT WHICH A GIVEN RISK OF EARLY DEATH IS EXCEEDED
*****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
74 TYPE2NUMBER 0
*
*****
* RESULT 3 - POPULATION EXCEEDING A DOSE THRESHOLD
*****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
75 TYPE3NUMBER 2
*
76 TYPE3OUT001 'L-EDEWBODY' 2.0 * 2 Sv = 200 rem
77 TYPE3OUT002 'L-EDEWBODY' 0.25 * 0.25 Sv = 25 rem
*
*****
* RESULT 4 - AVERAGE INDIVIDUAL RISK
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X Non-Safety Related	Page 1.5-53 of 1.5-374	
Client PSEG Nuclear Development		Prepared by	
Project PSEG ESPA		Reviewed by	
Proj. No 12380-001		Approved by	
Equip. No.		Date	

```

*****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
78 TYPE4NUMBER 0
*
*****
* RESULT 5 - POPULATION DOSE
*****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
79 TYPE5NUMBER 2
*
* NAME I1DIS5 I2DIS5
*
80 TYPE5OUT001 'L-EDEWBODY' 1 6 * 0 to 10 miles
81 TYPE5OUT002 'L-EDEWBODY' 1 10 * 0 to 50 miles
*
*****
* RESULT 6 - CENTERLINE DOSE VS. DISTANCE
*****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
82 TYPE6NUMBER 0
*
*****
* RESULT 7 - CENTERLINE RISK VS. DISTANCE
*****
*
* TYPE7NUMBER 0
*
*****
* RESULT 8 - POPULATION-WEIGHTED RISK
*****

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-54 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	

```

*****
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
84 TYPE8NUMBER      6
*
*          NAME          I1DIS8 I2DIS8
*
85 TYPE8OUT001 'ERL FAT/TOTAL'  1  10 *0-50 MILES
86 TYPE8OUT002 'ERL FAT/TOTAL'  1  2  *0- 2 MILES
87 TYPE8OUT003 'ERL FAT/TOTAL'  1  1  *0- 1 MILES
88 TYPE8OUT004 'ERL FAT/TOTAL'  3  3  *2- 3 MILES
89 TYPE8OUT005 'CAN FAT/TOTAL'  1  10 *0-50 MILES
90 TYPE8OUT006 'CAN FAT/TOTAL'  1  6  *0-10 MILES
*
*****
* RESULT A - PEAK DOSE AT A DISTANCE
*
*          NUMA
* TYPEANUMBER      1
*
*          NAME          I1DISA I2DISA
* TYPEAOUT001 'L-EDEWBODY'  1  1  CCDF
*
*****
* RESULT B - PEAK DOSE AT AN (r, theta) LOCATION
*
*          TYPEBNUMBER      0
*
*****
* TERMINATOR CARD
*
*****
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

***** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT *****

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ = 386
 NUMBER OF BLANK OR COMMENT RECORDS READ = 292
 NUMBER OF TERMINATOR RECORDS = 1
 NUMBER OF RECORDS PROCESSED = 93
 NUMBER OF PROCESSED RECORDS DUPLICATED = 0
 NUMBER OF PROCESSED RECORDS SORTED = 93

The list of defined organs is as follows (A- is ACUTE and L- is LIFETIME) :

- A-SKIN
- A-RED MARR
- A-LUNGS
- A-THYROIDH
- A-STOMACH
- A-LOWER LI
- L-EDEMBODY
- L-RED MARR
- L-BONE SUR
- L-BREAST
- L-LUNGS
- L-THYROID
- L-LOWER LI
- L-BLAD WAL
- L-LIVER
- L-THYROIDH

Am using a DOSFAC/DOSFAC2/IDCF2 dose factor file



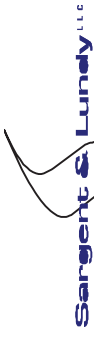
Calcs. For		ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2	Date	
Safety Related	X	Non-Safety Related		Page	1.5-56 of 1.5-374
Client	PSEG Nuclear Development				Date
Project	PSEG ESPA				Date
Proj. No	12380-001	Equip. No.			

READING FROM A DOSE CONVERSION FILE WITH THE FOLLOWING HEADER:
 MACCS File DOSDATA.INP: Changed by D. CHANIN25-JUN-92, 09:53:47
 Seven new organs added with MACCS Version 1.5.11.1

USING THE FOLLOWING SITE DATA FILE:

MACCS2 SITE FILE FOR PSEG ESPA
 Originator: G. Teagarden (7/14/2008) - Population Updated by S&L 10/2009

10 SPATIAL INTERVALS	16 WIND DIRECTIONS	7 CROP CATEGORIES	4 WATER PATHWAY ISOTOPES	2 WATERSHEDS	63 ECONOMIC REGIONS	SPATIAL DISTANCES	POPULATION			
4.8280	3.2187	80.4674	6.4374	8.0467	8.0467	16.0935	32.1869	48.2804		
0.	0.	0.	0.	170.	362.	200986.	177866.			
448847.	363839.	0.	5.	9.	50.	8729.	27634.	187239.		
951522.	1053252.	0.	2.	9.	67.	5174.	14923.	171366.		
696849.	709835.	0.	19.	50.	312.	1875.	7485.	79517.		
168204.	78672.	0.	14.	47.	42.	1631.	37292.	107168.		
41884.	87062.	0.	0.	0.	4.	539.	28321.	34813.		
14908.	28408.	0.	0.	0.	0.	9.	135.	895.		
56.	47396.	0.	0.	0.	0.	10.	256.	2592.		



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-57 of 1.5-374

Client	PSEG Nuclear Development		X	Non-Safety Related	Prepared by	Date
Project	PSEG ESPA				Reviewed by	Date
Proj. No	12380-001	Equip. No.			Approved by	Date

2693.	19048.	0.	0.	5.	190.	23209.	136055.
0.	0.	0.	0.	5.	190.	23209.	136055.
62733.	54529.	0.	6.	9.	828.	33333.	26456.
0.	0.	0.	6.	9.	828.	33333.	26456.
26232.	39908.	2.	9.	11.	2398.	6341.	12703.
0.	0.	2.	9.	11.	2398.	6341.	12703.
14398.	23676.	2.	22.	208.	5766.	8588.	6352.
0.	0.	2.	22.	208.	5766.	8588.	6352.
18349.	32002.	3.	181.	436.	19211.	15582.	15301.
0.	0.	3.	181.	436.	19211.	15582.	15301.
71710.	242510.	70.	220.	373.	5284.	78925.	106793.
0.	0.	70.	220.	373.	5284.	78925.	106793.
90311.	37500.	0.	164.	227.	3551.	165975.	93291.
0.	0.	0.	164.	227.	3551.	165975.	93291.
74425.	67892.	0.	118.	37.	2432.	179067.	163291.
0.	0.	0.	118.	37.	2432.	179067.	163291.
220746.	138597.						

LAND FRACTION

1.00	0.95	0.30	0.25	0.40	0.75	0.92	0.99	1.00
1.00	1.00	0.93	0.97	1.00	0.95	0.85	0.95	0.99
1.00	1.00	0.99	0.96	0.95	0.99	0.99	0.98	0.98
1.00	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00
0.95	0.95	0.97	1.00	1.00	1.00	0.99	1.00	0.99
0.03	0.25	0.50	0.65	0.75	1.00	0.98	0.92	0.95
0.01	0.00	0.00	0.00	0.00	0.33	0.35	0.03	0.40
0.01	0.00	0.00	0.00	0.00	0.03	0.50	0.35	0.40
0.01	0.00	0.03	0.45	0.60	0.97	0.99	0.99	0.99
0.01	0.00	0.45	0.97	0.92	1.00	1.00	1.00	0.99
0.01	0.00	0.50	0.92	0.95	0.98	1.00	0.98	0.75
0.01	0.00	0.45	0.92	0.92	0.99	0.97	0.93	0.75
0.01	0.00	0.15	0.92	0.92	0.99	0.93	0.40	0.80
0.01	0.00	0.00	0.70	0.97	0.99	0.93	0.90	0.90
0.15	0.00	0.01	0.25	0.85	0.99	1.00	1.00	0.99
0.95	0.30	0.01	0.10	0.35	0.75	0.90	1.00	0.99

REGION INDEX



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

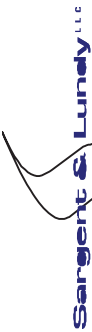
Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-59 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related		Prepared by	Date
2 STORED FORAGE	150. 240.		0.1300			
3 GRAINS	150. 240.		0.2100			
4 GRN LEAFY VEGETABLES	150. 240.		0.0020			
5 OTHER FOOD CROPS	150. 240.		0.0040			
6 LEGUMES AND SEEDS	150. 240.		0.1500			
7 ROOTS AND TUBERS	150. 240.		0.0030			
WATERSHED DEFINITION -- INITIAL AND ANNUAL WASHOFF AND INGESTION FACTORS						
1 Sr-89			5.00E-06			0.0
2 Sr-90			5.00E-06			0.0
3 Cs-134			5.00E-06			0.0
4 Cs-137			5.00E-06			0.0

REGIONAL ECONOMIC DATA

01 EXCLUSION	0.45	0.090	1861.3	13673.7	235830.7
02 SALEM	0.45	0.090	1861.3	13673.7	235830.7
03 N CASTLE	0.26	0.079	0948.0	19736.6	303569.3
04 N-20	0.20	0.037	2157.6	20444.1	277602.8
05 N-30	0.05	0.017	1958.8	18162.9	307006.4
06 N-40	0.13	0.100	1964.7	26183.0	351488.1
07 NNE-20	0.25	0.036	3144.9	26457.8	247747.7
08 NNE-30	0.12	0.013	2768.2	26733.3	250181.2
09 NNE-40	0.11	0.026	1981.1	22799.4	265861.5
10 NE-10	0.44	0.086	1981.3	13740.5	233949.1
11 NE-20	0.32	0.056	2672.0	21747.8	243357.2
12 NE-30	0.16	0.016	3403.4	29136.5	253768.9
13 NE-40	0.15	0.027	3187.8	23824.1	271205.3
14 ENE-5	0.43	0.083	2101.4	13807.3	232067.4
15 ENE-10	0.25	0.020	4021.7	14876.9	201961.4
16 ENE-20	0.29	0.035	3504.3	16494.4	215132.8
17 ENE-30	0.13	0.007	5595.6	19080.4	237336.0
18 ENE-40	0.09	0.003	6164.9	18356.6	245615.2
19 E-5	0.30	0.036	3541.6	14609.5	209487.9
20 CUMBERLND	0.23	0.012	4261.8	15010.6	198198.1
21 E-30	0.17	0.007	4389.2	16606.7	223788.3
22 E-40	0.07	0.000	4218.1	19155.6	265936.7
23 ESE-5	0.32	0.044	3301.6	14475.8	213251.2



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-61 of 1.5-374

Client PSEG Nuclear Development	Safety Related	Non-Safety Related
Project PSEG ESPA	X	
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

59 NWN-5	0.41	0.088	1678.7	14886.2	249378.4
60 NWN-10	0.31	0.082	1176.3	18220.9	286634.7
61 NWN-20	0.23	0.072	2025.2	21198.8	320127.6
62 NWN-30	0.30	0.107	4966.1	27892.5	366917.4
63 NWN-40	0.33	0.128	5161.7	29958.4	338693.0

END
*23456789012345678901234567890123456789012345678901234567890 - alignment

POPULATION

```

***** BEGINNING OF CHANGE CASE 1 USER INPUT *****
*
* *****
* EMERGENCY RESPONSE SCENARIO NUMBER 2
* *****
* *****
* EVACUATION ZONE DATA BLOCK
* *****
* SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
*
94 EZEANAM2001 'NO EVACUATION'
***** RECORD NUMBER 94 REPLACES RECORD NUMBER 34 *****
*
* WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO
* 5% OF PEOPLE RELOCATED (NO EVACUATION)
*
95 EZWTFRAC001 0.05
***** RECORD NUMBER 95 REPLACES RECORD NUMBER 36 *****
*
* LAST RING IN THE MOVEMENT ZONE
* A ZERO TURNS OFF THE EVACUATION MODEL
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X	Page	1.5-62 of 1.5-374
Non-Safety Related		Prepared by	Date
Client	PSEG Nuclear Development	Reviewed by	Date
Project	PSEG ESPA	Approved by	Date
Proj. No	12380-001	Equip. No.	

96 EZIASMOV001 0
 ***** RECORD NUMBER 96 REPLACES RECORD NUMBER 37 *****
 ***** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 1 USER INPUT *****
 USER INPUT PROCESSING SUMMARY - CHANGE CASE 1
 NUMBER OF RECORDS CHANGED = 3
 NUMBER OF RECORDS ADDED = 0

NO EVACUATION REQUESTED

***** WARNING -- THE FOLLOWING RECORDS WERE NEVER ACCESSED *****

DESCRIPTIVE TITLE DESCRIBING THIS "EARLY" INPUT FILE

USER INPUT IS READ FROM UNIT 26
 RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.
 THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
 THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

RECORD
 NUMBER RECORD

 * FILE NAME E.3.INP
 *
 * Sargent & Lundy (10/2009)
 *



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.5-63 of 1.5-374
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

* DESCRIPTIVE TITLE DESCRIBING THIS "CHRONC" INPUT FILE
*
1 CHCHNAME001 'GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS '
*
* ECONOMIC DATA USED: 2009 CPI, 2002 CENSUS OF AGRICULTURE, 2005 BEA & BLS DATA
*
*****
* EMERGENCY RESPONSE COST DATA
*****
* EMERGENCY PHASE - DAILY COST FOR PERSON RELOCATED ($/PERSON-DAY)
*
2 CHEVACST001 53.19 * 27.00 * 1.97
*
* INTERMEDIATE PHASE - DAILY COST FOR PERSON RELOCATED ($/PERSON-DAY)
*
3 CHRELCST001 53.19 * 27.00 * 1.97
*
*****
* LONG TERM PROTECTIVE ACTION DATA
*****
*
4 DUR_INTPHAS 0.0 *(in seconds) (no intermediate phase)
*
* LONG-TERM PHASE DOSE PROJECTION PERIOD, THE DURATION OF THE EXPOSURE
* PERIOD OVER WHICH THE LONG-TERM DOSE CRITERION IS EVALUATED (SECONDS)
*
5 CHTMPACT001 1.58E8 * seconds (5 YEARS)
*
* DOSE CRITERION FOR INTERMEDIATE PHASE RELOCATION (Sv) (YEAR 0-0.5)
*
6 CHDSCRTI001 1.0E5 (NO INTERMEDIATE PHASE RELOCATION)
*
* DOSE CRITERION FOR LONG-TERM PHASE RELOCATION (Sv) * (YEAR 0.5-5)
*

```

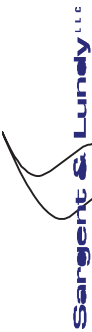


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.5-64 of 1.5-374
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

7 CHDSCRLT001 0.03 (3 REM)
 *
 * CRITICAL ORGAN NAME FOR LONG-TERM ACTIONS
 *
 8 CHCRTOCR001 'L-EDEWBODY'
 *
 * LONG TERM EXPOSURE PERIOD
 *
 9 CHEXPTIM001 1.58E9 * (50 YEARS PER EPA STANDARD DEFAULT EXPONENTIAL FACTORS)
 *

 * DECONTAMINATION PLAN DATA BLOCK

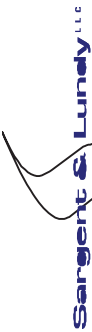
 *
 * NUMBER OF LEVELS OF DECONTAMINATION
 *
 10 CHLVLDEC001 2
 *
 * DECONTAMINATION TIMES CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
 * (SECONDS)
 *
 11 CHTIMDEC001 5.184E6 1.0368E7 (60, 120 DAYS)
 *
 * DOSE REDUCTION FACTORS CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
 *
 12 CHDSRFACT001 3. 15.
 *
 * COST OF FARM DECONTAMINATION PER FARMLAND UNIT AREA (DOLLARS/HECTARE)
 * FOR THE VARIOUS LEVELS OF DECONTAMINATION
 *
 13 CHCDFRM0001 1109. 2463.
 *
 * COST OF NONFARM DECONTAMINATION PER RESIDENT PERSON (DOLLARS/PERSON)
 * FOR THE VARIOUS LEVELS OF DECONTAMINATION
 *



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.5-65 of 1.5-374

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
Prepared by	Date	
Reviewed by	Date	
Approved by	Date	

14	CHCDNFRM001	5910.	15760.	
*	* FRACTION OF FARMLAND DECONTAMINATION COST DUE TO LABOR			
*	* FOR THE VARIOUS DECONTAMINATION LEVELS			
*				
15	CHFRFDL0001	.3	.35	
*	* FRACTION OF NON-FARM DECONTAMINATION COST DUE TO LABOR			
*	* FOR THE VARIOUS DECONTAMINATION LEVELS			
*				
16	CHFRNFDL001	.7	.5	
*	* FRACTION OF TIME WORKERS IN FARM AREAS SPEND IN CONTAMINATED AREAS			
*	* FOR THE VARIOUS DECONTAMINATION LEVELS			
*				
17	CHTFWKF0001	.10	.33	
*	* FRACTION OF TIME WORKERS IN NON-FARM AREAS SPEND IN CONTAMINATED AREAS			
*	* FOR THE VARIOUS DECONTAMINATION LEVELS			
*				
18	CHTFWKNF001	.33	.33	
*	* AVERAGE COST OF DECONTAMINATION LABOR (DOLLARS/MAN-YEAR)			
*				
19	CHDLBCST001	68950.		
*	*****			
*	* INTERDICTION COST DATA BLOCK			
*	*****			
*	* DEPRECIATION (DETERIORATION) RATE DURING INTERDICTION PERIOD (PER YEAR)			
*				
20	CHDPRATE001	.20		* (NUREG/CR-4551 PART 7 TABLE 5.1)
*	* INVESTMENT INCOME RETURN (DISCOUNT RATE) DURING INTERDICTION PERIOD (PER YEAR)			



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.5-66 of 1.5-374	
Non-Safety Related		Prepared by	Date
Client PSEG Nuclear Development		Reviewed by	Date
Project PSEG ESPA		Approved by	Date
Proj. No 12380-001	Equip. No.		

* THIS VALUE SHOULD BE DERIVED AS A REAL RETURN RATE ADJUSTED FOR INFLATION.

21 CHDSRATE001 .07 *(NEI 05-01)

* POPULATION RELOCATION COST (DOLLARS/PERSON)

22 CHPOPCST001 9850.

* GROUNDSHINE WEATHERING DEFINITION DATA BLOCK

* NUMBER OF TERMS IN THE GROUNDSHINE WEATHERING RELATIONSHIP (EITHER 1 OR 2)

23 CHNGWTRM001 2

* GROUNDSHINE WEATHERING COEFFICIENTS

24 CHGWCOEF001 0.5 0.5

* HALF LIVES CORRESPONDING TO THE GROUNDSHINE WEATHERING COEFFICIENTS (S)

25 CHTGWHLF001 1.6E7 2.8E9

* RESUSPENSION WEATHERING DEFINITION DATA BLOCK

* NUMBER OF TERMS IN THE RESUSPENSION WEATHERING RELATIONSHIP

26 CHNRWTRM001 3

* RESUSPENSION CONCENTRATION COEFFICIENTS (/ METER)

* RELATIONSHIP BETWEEN GROUND CONCENTRATION AND INSTANTANEOUS AIR CONC.

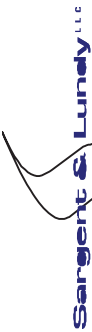


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.5-68 of 1.5-374
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

34 CHFRFIM001 0.25 * SURRY & PEACH BOTTOM (NUREG/CR-4551 PART 7, TABLE 5.4)
*
* NON-FARM WEALTH, PROPERTY AND IMPROVEMENTS FOR THE REGION (DOLLARS/PERSON)
* THE VALUE OF ALL RESIDENTIAL, BUSINESS, AND PUBLIC ASSETS WHICH WOULD BE
* LOST IN THE EVENT OF PERMANENT INTERDICTION (CONDEMNATION) OF THE AREA
*
35 CHVALWNF001 275924.
*
* FRACTION OF NON-FARM WEALTH IN IMPROVEMENTS FOR THE REGION
*
36 CHFRNFIM001 0.8
*
*****
* FOOD INGESTION MODEL
*****
*
*NEW COMIDA2-BASED FOOD INGESTION MODEL
*
37 CHFDPATH001 'NEW'
*
* FILE PATH OF THE COMIDA2 FILE
*
38 BIN_FILE001 'C:\MACCS2\SAMP_A.BIN'
*
* THE MAXIMUM ALLOWABLE FOOD INGESTION DOSE FROM MILK CROPS
*
* EFFECTIVE THYROID (SV)
39 DOSEMILK001 0.0025 0.025
40 DOSEOTHR001 0.0025 0.025
*
* EFFECTIVE THYROID (SV)
41 DOSELONG001 0.005 0.050
*
* NUMBER OF NUCLIDES IN THE WATER INGESTION PATHWAY MODEL
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X	Page	1.5-69 of 1.5-374
Non-Safety Related		Prepared by	Date
Client PSEG Nuclear Development		Reviewed by	Date
Project PSEG ESPA		Approved by	Date
Proj. No 12380-001		Equip. No.	

```

42 CHNUMWPI001      4
*
* TABLE OF NUCLIDE DEFINITIONS IN THE WATER INGESTION PATHWAY MODEL
*
* IF A SITE DATA FILE IS DEFINED, THE DATA DEFINING THE WATERSHED INGESTION
* FACTOR IS SUPERSEDED BY THE CORRESPONDING DATA IN THE SITE DATA FILE
*
*
* INITIAL ANNUAL INGESTION FACTOR
* WATER WASHOFF WASHOFF ( (Bq INGESTED) /
* NUCLIDE FRACTION RATE (Bq IN WATER) )
*
* NAMWPI WSHRTA WINGF
* CHWTRISO001 Sr-89 0.01 0.004 5.0E-6
* CHWTRISO002 Sr-90 0.01 0.004 5.0E-6
* CHWTRISO003 Cs-134 0.005 0.001 5.0E-6
* CHWTRISO004 Cs-137 0.005 0.001 5.0E-6
*
*****
* SPECIAL OPTIONS DATA BLOCK
*****
*
* DETAILED PRINT OPTION CONTROL SWITCHES, LOOK AT THE CODE BEFORE TURNING ON!!
*
* KSWDSC
*
47 CHKSWTCH001 0
*
*****
* POPULATION DOSE RESULTS
*****
* DEFINE THE TYPE 9 RESULTS
* LONG-TERM POPULATION DOSE IN A GIVEN REGION BROKEN DOWN BY THE 12 PATHWAYS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

48 TYPE9NUMBER 2 (UP TO 10 ALLOWED)
*
* ORGNAM INNER OUTER
*
49 TYPE9OUT001 'L-EDEWBODY' 1 6 (0-10 MILES)
50 TYPE9OUT002 'L-EDEWBODY' 1 10 (0-50 MILES)
*
*****
* ECONOMIC COST RESULTS
*****
* ECONOMIC COST RESULTS IN A REGION BROKEN DOWN BY 12 TYPES OF COSTS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
*
51 TYP10NUMBER 1 * (UP TO 10 ALLOWED)
*
* INNER OUTER
*
52 TYP10OUT001 1 10 *(0-50 MILES)
*
*****
* ACTION DISTANCE RESULTS
*****
*
* DEFINE A FLAG THAT CONTROLS THE PRODUCTION OF THE ACTION DISTANCE RESULTS
*
* SPECIFYING A VALUE OF .TRUE. TURNS ON ALL 8 OF THE ACTION DISTANCE RESULTS,
* A VALUE OF .FALSE. WILL ELIMINATE THE ACTION DISTANCE RESULTS FROM THE OUTPUT.
*
53 TYP11FLAG11 .FALSE.
*
*****
* IMPACTED AREA/POPULATION RESULTS
*****

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.5-71 of 1.5-374
Non-Safety Related		Prepared by	Date
Client	PSEG Nuclear Development	Reviewed by	Date
Project	PSEG ESPA	Approved by	Date
Proj. No	12380-001	Equip. No.	

* IMPACTED AREA/POPULATION RESULTS IN A REGION BROKEN DOWN BY 6 TYPES OF IMPACTS

* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
 * FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 8

54 TYP12NUMBER 1 (UP TO 10 ALLOWED)

* INNER OUTER

55 TYP12OUT001 1 10 (0-50 MILES)

* MAXIMAL ANNUAL FOOD INGESTION DOSE TO AN INDIVIDUAL

* MAXIMAL ANNUAL FOOD INGESTION DOSE TO AN INDIVIDUAL

* This result is calculated after accounting for temporary or permanent interdiction. It is only available for the "new" food model.

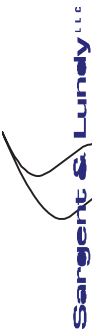
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED

56 TYP13NUMBER 0 (UP TO 10 ALLOWED)

***** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT *****

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ = 314
 NUMBER OF BLANK OR COMMENT RECORDS READ = 257
 NUMBER OF TERMINATOR RECORDS = 1



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.5-72 of 1.5-374
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

NUMBER OF RECORDS PROCESSED = 56
 NUMBER OF PROCESSED RECORDS DUPLICATED = 0
 NUMBER OF PROCESSED RECORDS SORTED = 56

COMIDA2 binary file header =
 COMIDA2 01/14/2004 13:06:02 Version 1.11.1, 01/12/2004

COMIDA2 descriptive title =
 MACCS File DOSDATA.INP: Changed by D. CHANIN25-JUN-92, 09:53:47

Seven new organs added with MACCS Version 1.5.11.1

A SITE DATA FILE IS BEING USED FOR BOTH "EARLY" AND "CHRONC"

7 CANCER EFFECTS ARE DEFINED IN THE MODEL.

INDEX	CANCER EFFECT	ORGAN	ALPHA	BETA	CFRISK	CIRISK
1	LEUKEMIA	L-RED MARR	1.000E+00	0.000E+00	9.700E-03	0.000E+00
2	BONE	L-BONE SUR	1.000E+00	0.000E+00	1.200E-04	0.000E+00
3	BREAST	L-BREAST	1.000E+00	0.000E+00	5.400E-03	1.700E-02
4	LUNG	L-LUNGS	1.000E+00	0.000E+00	1.550E-02	0.000E+00
5	THYROID	L-THYROIDH	1.000E+00	0.000E+00	7.200E-04	7.200E-03
6	GI	L-LOWER LI	1.000E+00	0.000E+00	3.360E-02	0.000E+00
7	OTHER	L-EDEWBODY	1.000E+00	0.000E+00	2.760E-02	0.000E+00

TIME OF HOTSPOT RELOCATION IS 4.3200E+04.
 TIME OF NORMAL RETURN IS 8.640E+04 AND THE EMERGENCY PHASE ENDS AT 6.048E+05.

GROUNDSHINE SHIELDING FACTOR = 0.330
 RESUSPENSION PROTECTION FACTOR = 0.410



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No.	2009-11222		
Rev.	2	Date	
Page	1.5-73	of	1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

BREATHING RATE (CUBIC M/S) = 2.660E-04

DISPERSION MODEL FLAG IS 2

WINDROSE PROBABILITIES BY WIND DIRECTION AND MET BIN NUMBER

BIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	0.1923	0.0000	0.2692	0.0385	0.1154	0.0769	0.0000	0.0385	0.0385	0.0000	0.0000	0.0000	0.0385	0.0769	0.0000	0.1154
2	0.0050	0.0050	0.0274	0.0498	0.0871	0.0920	0.2438	0.1542	0.0622	0.0398	0.0199	0.0025	0.0149	0.0149	0.0995	0.0821
3	0.0000	0.0303	0.0606	0.0000	0.0000	0.0606	0.0303	0.0909	0.0909	0.2121	0.1212	0.0909	0.1212	0.0303	0.0000	0.0606
4	0.0734	0.0765	0.0550	0.0489	0.0550	0.0673	0.0642	0.0765	0.0765	0.0887	0.0703	0.0642	0.0398	0.0306	0.0336	0.0795
5	0.0852	0.0762	0.1181	0.0658	0.0688	0.0553	0.0553	0.0688	0.0703	0.0538	0.0493	0.0538	0.0463	0.0209	0.0404	0.0717
6	0.0758	0.0735	0.0719	0.0579	0.0774	0.0618	0.0970	0.0774	0.0500	0.0970	0.0868	0.0219	0.0039	0.0172	0.0508	0.0797
7	0.0821	0.0709	0.0311	0.0311	0.0684	0.1356	0.1791	0.0585	0.0659	0.0435	0.0249	0.0050	0.0000	0.0112	0.1119	0.0808
8	0.0144	0.0072	0.0108	0.0072	0.0325	0.2022	0.2455	0.0975	0.0144	0.0108	0.0072	0.0000	0.0000	0.0072	0.2599	0.0830
9	0.0326	0.0543	0.0217	0.0109	0.0870	0.0870	0.0761	0.0435	0.0870	0.1087	0.0761	0.1087	0.0761	0.0543	0.0326	0.0435
10	0.0352	0.0462	0.0527	0.0637	0.0593	0.0571	0.0725	0.0637	0.0593	0.0923	0.0879	0.0901	0.1011	0.0308	0.0330	0.0549
11	0.0400	0.0471	0.0986	0.0857	0.0657	0.0714	0.1100	0.0786	0.0786	0.0729	0.0757	0.0386	0.0200	0.0371	0.0400	0.0400
12	0.0637	0.0922	0.0600	0.0817	0.0735	0.0765	0.1319	0.0802	0.0967	0.0427	0.0195	0.0060	0.0022	0.0210	0.1042	0.0480
13	0.0833	0.0208	0.0625	0.0208	0.0625	0.1042	0.0417	0.0208	0.0208	0.1250	0.0417	0.1250	0.0417	0.1250	0.1042	0.0000
14	0.0549	0.0506	0.0506	0.0506	0.0506	0.0380	0.0253	0.0295	0.0928	0.1013	0.0970	0.0886	0.1055	0.0464	0.0675	0.0506
15	0.0224	0.0224	0.0705	0.0449	0.0288	0.0353	0.0705	0.0737	0.1154	0.0737	0.1186	0.0321	0.0064	0.0609	0.1763	0.0481
16	0.0180	0.0420	0.0571	0.0841	0.0270	0.0180	0.0661	0.0631	0.0661	0.0571	0.0330	0.0030	0.0000	0.0030	0.3964	0.0661
17	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
18	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
19	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
20	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
21	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
22	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
23	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
24	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
25	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
26	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
27	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
28	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
29	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.5-74 of 1.5-374	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
	Equip. No.		

30	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
31	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
32	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
33	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
34	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
35	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
36	0.0517	0.0496	0.0517	0.0433	0.0223	0.0196	0.0356	0.0349	0.0384	0.0838	0.1327	0.1292	0.0566	0.0503	0.1173	0.0831
37	0.0561	0.0592	0.0619	0.0568	0.0581	0.0672	0.1015	0.0693	0.0659	0.0687	0.0674	0.0459	0.0274	0.0283	0.0989	0.0675
38	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
39	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
40	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
41	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Processing a Site Data File with Header: MACCS2 SITE FILE FOR PSEG ESPA
 Originator: G. Teagarden (7/14/2008) - Population Updated by S&L 10/2009



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.5-75 of 1.5-374
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

THIS PROGRAM CURRENTLY ALLOWS THE GENERATION OF UP TO 394 RESULTS

YOU HAVE REQUESTED 16 RESULTS FROM "EARLY" COMPOSED OF:

- 5 RESULTS OF TYPE 1
- 0 RESULTS OF TYPE 2
- 2 RESULTS OF TYPE 3
- 0 RESULTS OF TYPE 4
- 2 RESULTS OF TYPE 5
- 0 RESULTS OF TYPE 6
- 0 RESULTS OF TYPE 7
- 6 RESULTS OF TYPE 8
- 1 RESULTS OF TYPE A
- 0 RESULTS OF TYPE B

YOU HAVE REQUESTED 55 RESULTS FROM "CHRONC" COMPOSED OF:

- 34 RESULTS OF TYPE 9
- 13 RESULTS OF TYPE 10
- 0 RESULTS OF TYPE 11
- 8 RESULTS OF TYPE 12
- 0 RESULTS OF TYPE 13

TRIAL	DAY	HOUR	BIN	PRBMET
1	152	7	18	4.00E-04
For Julian Day 152, selecting COMIDA2 results # 4 of 9				
2	152	13	24	1.14E-04
For Julian Day 152, selecting COMIDA2 results # 4 of 9				
3	152	18	21	2.40E-03
For Julian Day 152, selecting COMIDA2 results # 4 of 9				
4	153	4	3	3.14E-04
For Julian Day 153, selecting COMIDA2 results # 4 of 9				
5	153	7	26	2.95E-04
For Julian Day 153, selecting COMIDA2 results # 4 of 9				

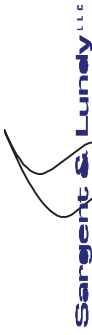


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-76 of 1.5-374

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA				
Proj. No	12380-001	Equip. No.			
		Prepared by		Date	
		Reviewed by		Date	
		Approved by		Date	

6	153	9	26	2.95E-04
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9	
7	153	12	25	3.04E-04
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9	
8	153	14	25	3.04E-04
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9	
9	154	24	9	8.75E-04
For Julian Day 154,	selecting	COMIDA2	results # 4 of 9	
10	155	17	6	1.22E-02
For Julian Day 155,	selecting	COMIDA2	results # 4 of 9	
11	156	20	26	2.95E-04
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9	
12	156	23	26	2.95E-04
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9	
13	157	2	25	3.04E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
14	157	3	24	1.14E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
15	157	4	22	7.23E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
16	157	17	27	2.76E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
17	157	18	27	2.76E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
18	157	19	22	7.23E-04
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9	
19	158	17	4	3.11E-03
For Julian Day 158,	selecting	COMIDA2	results # 4 of 9	
20	159	7	3	3.14E-04
For Julian Day 159,	selecting	COMIDA2	results # 4 of 9	
21	159	11	1	2.47E-04
For Julian Day 159,	selecting	COMIDA2	results # 4 of 9	
22	160	7	10	4.33E-03
For Julian Day 160,	selecting	COMIDA2	results # 4 of 9	
23	160	14	12	1.27E-02



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-77 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 160, selecting COMIDA2 results # 4 of 9
 24 162 12 36 2.19E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 25 162 14 36 2.19E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 26 162 15 35 2.47E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 27 162 17 34 1.14E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 28 162 18 32 3.61E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 29 162 20 19 9.51E-04

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 30 162 24 20 3.17E-03

For Julian Day 162, selecting COMIDA2 results # 4 of 9
 31 163 14 17 3.45E-03

For Julian Day 163, selecting COMIDA2 results # 4 of 9
 32 163 19 18 4.00E-04

For Julian Day 163, selecting COMIDA2 results # 4 of 9
 33 166 10 7 7.65E-03

For Julian Day 166, selecting COMIDA2 results # 4 of 9
 34 166 16 36 2.19E-04

For Julian Day 166, selecting COMIDA2 results # 4 of 9
 35 166 18 36 2.19E-04

For Julian Day 166, selecting COMIDA2 results # 4 of 9
 36 166 19 35 2.47E-04

For Julian Day 166, selecting COMIDA2 results # 4 of 9
 37 167 12 5 6.36E-03

For Julian Day 167, selecting COMIDA2 results # 5 of 9
 38 167 21 15 2.97E-03

For Julian Day 167, selecting COMIDA2 results # 5 of 9
 39 168 4 11 6.66E-03

For Julian Day 168, selecting COMIDA2 results # 5 of 9
 40 169 7 31 2.85E-04

For Julian Day 169, selecting COMIDA2 results # 5 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-78 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related
41	169	10	31 2.85E-04
For Julian Day 169, selecting COMIDA2 results # 5 of 9			
42	169	11	31 2.85E-04
For Julian Day 169, selecting COMIDA2 results # 5 of 9			
43	169	13	30 2.57E-04
For Julian Day 169, selecting COMIDA2 results # 5 of 9			
44	169	15	29 1.14E-04
For Julian Day 169, selecting COMIDA2 results # 5 of 9			
45	169	16	28 1.14E-04
For Julian Day 169, selecting COMIDA2 results # 5 of 9			
46	169	18	30 2.57E-04
For Julian Day 169, selecting COMIDA2 results # 5 of 9			
47	169	20	29 1.14E-04
For Julian Day 169, selecting COMIDA2 results # 5 of 9			
48	169	21	27 2.76E-04
For Julian Day 169, selecting COMIDA2 results # 5 of 9			
49	173	16	8 2.64E-03
For Julian Day 173, selecting COMIDA2 results # 5 of 9			
50	174	16	25 3.04E-04
For Julian Day 174, selecting COMIDA2 results # 5 of 9			

TRIAL	DAY	HOUR	BIN	PRBMET
51	174	17	24	1.14E-04
For Julian Day 174, selecting COMIDA2 results # 5 of 9				
52	174	18	23	1.14E-04
For Julian Day 174, selecting COMIDA2 results # 5 of 9				
53	177	11	36	2.19E-04
For Julian Day 177, selecting COMIDA2 results # 5 of 9				
54	177	13	35	2.47E-04
For Julian Day 177, selecting COMIDA2 results # 5 of 9				
55	177	14	35	2.47E-04
For Julian Day 177, selecting COMIDA2 results # 5 of 9				
56	180	21	36	2.19E-04
For Julian Day 180, selecting COMIDA2 results # 5 of 9				



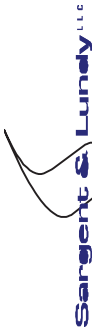
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-79 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

57	180	23	35	2.47E-04
For Julian Day 180,	selecting	COMIDA2	results # 5	of 9
58	180	24	34	1.14E-04
For Julian Day 180,	selecting	COMIDA2	results # 5	of 9
59	183	8	5	6.36E-03
For Julian Day 183,	selecting	COMIDA2	results # 5	of 9
60	183	13	26	2.95E-04
For Julian Day 183,	selecting	COMIDA2	results # 5	of 9
61	183	15	25	3.04E-04
For Julian Day 183,	selecting	COMIDA2	results # 5	of 9
62	183	16	22	7.23E-04
For Julian Day 183,	selecting	COMIDA2	results # 5	of 9
63	183	17	32	3.61E-04
For Julian Day 183,	selecting	COMIDA2	results # 5	of 9
64	185	15	4	3.11E-03
For Julian Day 185,	selecting	COMIDA2	results # 5	of 9
65	186	11	2	3.82E-03
For Julian Day 186,	selecting	COMIDA2	results # 5	of 9
66	186	15	8	2.64E-03
For Julian Day 186,	selecting	COMIDA2	results # 5	of 9
67	187	2	31	2.85E-04
For Julian Day 187,	selecting	COMIDA2	results # 5	of 9
68	187	3	30	2.57E-04
For Julian Day 187,	selecting	COMIDA2	results # 5	of 9
69	187	4	29	1.14E-04
For Julian Day 187,	selecting	COMIDA2	results # 5	of 9
70	189	2	14	2.25E-03
For Julian Day 189,	selecting	COMIDA2	results # 5	of 9
71	190	12	6	1.22E-02
For Julian Day 190,	selecting	COMIDA2	results # 5	of 9
72	190	22	16	3.17E-03
For Julian Day 190,	selecting	COMIDA2	results # 5	of 9
73	194	5	36	2.19E-04
For Julian Day 194,	selecting	COMIDA2	results # 6	of 9
74	194	8	32	3.61E-04



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-80 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 194, selecting COMIDA2 results # 6 of 9
75 194 14 27 2.76E-04

For Julian Day 194, selecting COMIDA2 results # 6 of 9
76 194 18 32 3.61E-04

For Julian Day 194, selecting COMIDA2 results # 6 of 9
77 196 3 10 4.33E-03

For Julian Day 196, selecting COMIDA2 results # 6 of 9
78 196 15 35 2.47E-04

For Julian Day 196, selecting COMIDA2 results # 6 of 9
79 198 20 11 6.66E-03

For Julian Day 198, selecting COMIDA2 results # 6 of 9
80 200 8 32 3.61E-04

For Julian Day 200, selecting COMIDA2 results # 6 of 9
81 202 24 9 8.75E-04

For Julian Day 202, selecting COMIDA2 results # 6 of 9
82 204 5 13 4.57E-04

For Julian Day 204, selecting COMIDA2 results # 6 of 9
83 204 16 7 7.65E-03

For Julian Day 204, selecting COMIDA2 results # 6 of 9
84 206 18 6 1.22E-02

For Julian Day 206, selecting COMIDA2 results # 6 of 9
85 209 2 5 6.36E-03

For Julian Day 209, selecting COMIDA2 results # 6 of 9
86 209 10 36 2.19E-04

For Julian Day 209, selecting COMIDA2 results # 6 of 9
87 209 13 32 3.61E-04

For Julian Day 209, selecting COMIDA2 results # 6 of 9
88 209 24 20 3.17E-03

For Julian Day 209, selecting COMIDA2 results # 6 of 9
89 210 2 19 9.51E-04

For Julian Day 210, selecting COMIDA2 results # 6 of 9
90 210 7 3 3.14E-04

For Julian Day 210, selecting COMIDA2 results # 6 of 9
91 210 10 4 3.11E-03

For Julian Day 210, selecting COMIDA2 results # 6 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-81 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related
92	210	12	4 3.11E-03
For Julian Day 210,	selecting	COMIDA2	results # 6 of 9
93	211	3	10 4.33E-03
For Julian Day 211,	selecting	COMIDA2	results # 6 of 9
94	215	2	9 8.75E-04
For Julian Day 215,	selecting	COMIDA2	results # 6 of 9
95	215	7	3 3.14E-04
For Julian Day 215,	selecting	COMIDA2	results # 6 of 9
96	216	4	3 3.14E-04
For Julian Day 216,	selecting	COMIDA2	results # 6 of 9
97	216	6	9 8.75E-04
For Julian Day 216,	selecting	COMIDA2	results # 6 of 9
98	217	3	11 6.66E-03
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
99	217	12	31 2.85E-04
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9
100	217	16	30 2.57E-04
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9

TRIAL	DAY	HOUR	BIN	PRBMET
101	217	18	30	2.57E-04
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9	
102	217	19	29	1.14E-04
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9	
103	217	20	27	2.76E-04
For Julian Day 217,	selecting	COMIDA2	results # 6 of 9	
104	218	6	19	9.51E-04
For Julian Day 218,	selecting	COMIDA2	results # 6 of 9	
105	218	23	12	1.27E-02
For Julian Day 218,	selecting	COMIDA2	results # 6 of 9	
106	223	22	7	7.65E-03
For Julian Day 223,	selecting	COMIDA2	results # 7 of 9	
107	224	18	17	3.45E-03
For Julian Day 224,	selecting	COMIDA2	results # 7 of 9	

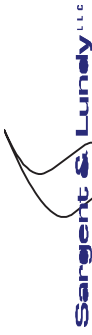


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-82 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

108	226	9	26	2.95E-04		
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9			
109	226	12	24	1.14E-04		
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9			
110	226	14	6	1.22E-02		
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9			
111	226	19	4	3.11E-03		
For Julian Day 226,	selecting	COMIDA2	results # 7 of 9			
112	227	16	18	4.00E-04		
For Julian Day 227,	selecting	COMIDA2	results # 7 of 9			
113	228	3	3	3.14E-04		
For Julian Day 228,	selecting	COMIDA2	results # 7 of 9			
114	228	5	10	4.33E-03		
For Julian Day 228,	selecting	COMIDA2	results # 7 of 9			
115	228	20	21	2.40E-03		
For Julian Day 228,	selecting	COMIDA2	results # 7 of 9			
116	229	6	17	3.45E-03		
For Julian Day 229,	selecting	COMIDA2	results # 7 of 9			
117	230	9	26	2.95E-04		
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9			
118	230	12	26	2.95E-04		
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9			
119	230	15	25	3.04E-04		
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9			
120	230	16	25	3.04E-04		
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9			
121	230	17	24	1.14E-04		
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9			
122	230	18	22	7.23E-04		
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9			
123	230	23	20	3.17E-03		
For Julian Day 230,	selecting	COMIDA2	results # 7 of 9			
124	231	13	36	2.19E-04		
For Julian Day 231,	selecting	COMIDA2	results # 7 of 9			
125	231	14	36	2.19E-04		



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-83	of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 231, selecting COMIDA2 results # 7 of 9
 126 231 16 35 2.47E-04
 For Julian Day 231, selecting COMIDA2 results # 7 of 9
 127 231 18 34 1.14E-04
 For Julian Day 231, selecting COMIDA2 results # 7 of 9
 128 234 14 30 2.57E-04
 For Julian Day 234, selecting COMIDA2 results # 7 of 9
 129 235 16 5 6.36E-03
 For Julian Day 235, selecting COMIDA2 results # 7 of 9
 130 236 13 1 2.47E-04
 For Julian Day 236, selecting COMIDA2 results # 7 of 9
 131 238 7 11 6.66E-03
 For Julian Day 238, selecting COMIDA2 results # 7 of 9
 132 243 12 27 2.76E-04
 For Julian Day 243, selecting COMIDA2 results # 7 of 9
 133 243 15 24 1.14E-04
 For Julian Day 243, selecting COMIDA2 results # 7 of 9
 134 243 17 26 2.95E-04
 For Julian Day 243, selecting COMIDA2 results # 7 of 9
 135 243 21 25 3.04E-04
 For Julian Day 243, selecting COMIDA2 results # 7 of 9
 136 243 23 24 1.14E-04
 For Julian Day 243, selecting COMIDA2 results # 7 of 9
 137 245 7 15 2.97E-03
 For Julian Day 245, selecting COMIDA2 results # 7 of 9
 138 248 3 14 2.25E-03
 For Julian Day 248, selecting COMIDA2 results # 7 of 9
 139 250 15 6 1.22E-02
 For Julian Day 250, selecting COMIDA2 results # 7 of 9
 140 251 10 1 2.47E-04
 For Julian Day 251, selecting COMIDA2 results # 7 of 9
 141 253 2 8 2.64E-03
 For Julian Day 253, selecting COMIDA2 results # 7 of 9
 142 253 4 25 3.04E-04
 For Julian Day 253, selecting COMIDA2 results # 7 of 9



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

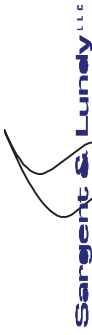
Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-84 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

143	254	4	12	1.27E-02
For Julian Day 254,	selecting	COMIDA2	results # 7	of 9
144	254	24	14	2.25E-03
For Julian Day 254,	selecting	COMIDA2	results # 7	of 9
145	255	13	5	6.36E-03
For Julian Day 255,	selecting	COMIDA2	results # 7	of 9
146	255	14	4	3.11E-03
For Julian Day 255,	selecting	COMIDA2	results # 7	of 9
147	260	5	3	3.14E-04
For Julian Day 260,	selecting	COMIDA2	results # 8	of 9
148	260	10	1	2.47E-04
For Julian Day 260,	selecting	COMIDA2	results # 8	of 9
149	263	14	2	3.82E-03
For Julian Day 263,	selecting	COMIDA2	results # 8	of 9
150	264	13	5	6.36E-03
For Julian Day 264,	selecting	COMIDA2	results # 8	of 9

TRIAL	DAY	HOUR	BIN	PRBMET
151	266	7	16	3.17E-03
For Julian Day 266,	selecting	COMIDA2	results # 8	of 9
152	269	8	9	8.75E-04
For Julian Day 269,	selecting	COMIDA2	results # 8	of 9
153	269	13	1	2.47E-04
For Julian Day 269,	selecting	COMIDA2	results # 8	of 9
154	270	21	9	8.75E-04
For Julian Day 270,	selecting	COMIDA2	results # 8	of 9
155	271	8	13	4.57E-04
For Julian Day 271,	selecting	COMIDA2	results # 8	of 9
156	271	17	21	2.40E-03
For Julian Day 271,	selecting	COMIDA2	results # 8	of 9
157	271	20	20	3.17E-03
For Julian Day 271,	selecting	COMIDA2	results # 8	of 9
158	271	24	18	4.00E-04
For Julian Day 271,	selecting	COMIDA2	results # 8	of 9

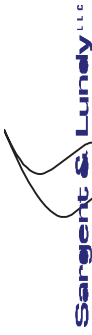


**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-85 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

159	272	2	31	2.85E-04		
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9		
160	272	3	30	2.57E-04		
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9		
161	272	6	29	1.14E-04		
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9		
162	272	9	36	2.19E-04		
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9		
163	272	11	35	2.47E-04		
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9		
164	272	13	34	1.14E-04		
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9		
165	272	15	32	3.61E-04		
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9		
166	272	21	32	3.61E-04		
For Julian Day 272,	selecting	COMIDA2	results #	8 of 9		
167	274	20	11	6.66E-03		
For Julian Day 274,	selecting	COMIDA2	results #	8 of 9		
168	274	21	15	2.97E-03		
For Julian Day 274,	selecting	COMIDA2	results #	8 of 9		
169	275	10	4	3.11E-03		
For Julian Day 275,	selecting	COMIDA2	results #	8 of 9		
170	276	3	21	2.40E-03		
For Julian Day 276,	selecting	COMIDA2	results #	8 of 9		
171	276	18	10	4.33E-03		
For Julian Day 276,	selecting	COMIDA2	results #	8 of 9		
172	277	17	3	3.14E-04		
For Julian Day 277,	selecting	COMIDA2	results #	8 of 9		
173	278	12	1	2.47E-04		
For Julian Day 278,	selecting	COMIDA2	results #	8 of 9		
174	280	9	4	3.11E-03		
For Julian Day 280,	selecting	COMIDA2	results #	8 of 9		
175	281	21	10	4.33E-03		
For Julian Day 281,	selecting	COMIDA2	results #	8 of 9		
176	281	24	13	4.57E-04		



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-86 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 281, selecting COMIDA2 results # 8 of 9
 177 282 6 13 4.57E-04

For Julian Day 282, selecting COMIDA2 results # 8 of 9
 178 282 7 13 4.57E-04

For Julian Day 282, selecting COMIDA2 results # 8 of 9
 179 282 8 9 8.75E-04

For Julian Day 282, selecting COMIDA2 results # 8 of 9
 180 285 8 7 7.65E-03

For Julian Day 285, selecting COMIDA2 results # 8 of 9
 181 285 14 2 3.82E-03

For Julian Day 285, selecting COMIDA2 results # 8 of 9
 182 289 23 12 1.27E-02

For Julian Day 289, selecting COMIDA2 results # 9 of 9
 183 292 21 19 9.51E-04

For Julian Day 292, selecting COMIDA2 results # 9 of 9
 184 292 24 27 2.76E-04

For Julian Day 292, selecting COMIDA2 results # 9 of 9
 185 293 1 32 3.61E-04

For Julian Day 293, selecting COMIDA2 results # 9 of 9
 186 293 3 17 3.45E-03

For Julian Day 293, selecting COMIDA2 results # 9 of 9
 187 297 22 15 2.97E-03

For Julian Day 297, selecting COMIDA2 results # 9 of 9
 188 299 7 10 4.33E-03

For Julian Day 299, selecting COMIDA2 results # 9 of 9
 189 299 18 3 3.14E-04

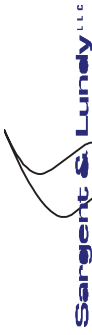
For Julian Day 299, selecting COMIDA2 results # 9 of 9
 190 300 3 11 6.66E-03

For Julian Day 300, selecting COMIDA2 results # 9 of 9
 191 300 16 6 1.22E-02

For Julian Day 300, selecting COMIDA2 results # 9 of 9
 192 301 20 14 2.25E-03

For Julian Day 301, selecting COMIDA2 results # 9 of 9
 193 302 14 5 6.36E-03

For Julian Day 302, selecting COMIDA2 results # 9 of 9



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page 1.5-87 of 1.5-374

Safety Related Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

Trial	Day	Hour	Bin	PRBMET
194	304	6	24	1.14E-04
For Julian Day 304,	selecting	COMIDA2	results # 9	of 9
195	309	9	18	4.00E-04
For Julian Day 309,	selecting	COMIDA2	results # 9	of 9
196	309	16	22	7.23E-04
For Julian Day 309,	selecting	COMIDA2	results # 9	of 9
197	313	1	16	3.17E-03
For Julian Day 313,	selecting	COMIDA2	results # 9	of 9
198	314	2	12	1.27E-02
For Julian Day 314,	selecting	COMIDA2	results # 9	of 9
199	315	2	31	2.85E-04
For Julian Day 315,	selecting	COMIDA2	results # 9	of 9
200	315	5	31	2.85E-04
For Julian Day 315,	selecting	COMIDA2	results # 9	of 9
201	315	7	30	2.57E-04
For Julian Day 315,	selecting	COMIDA2	results # 9	of 9
202	315	9	30	2.57E-04
For Julian Day 315,	selecting	COMIDA2	results # 9	of 9
203	315	10	29	1.14E-04
For Julian Day 315,	selecting	COMIDA2	results # 9	of 9
204	315	11	28	1.14E-04
For Julian Day 315,	selecting	COMIDA2	results # 9	of 9
205	315	12	27	2.76E-04
For Julian Day 315,	selecting	COMIDA2	results # 9	of 9
206	317	20	22	7.23E-04
For Julian Day 317,	selecting	COMIDA2	results # 9	of 9
207	318	6	7	7.65E-03
For Julian Day 318,	selecting	COMIDA2	results # 9	of 9
208	321	22	14	2.25E-03
For Julian Day 321,	selecting	COMIDA2	results # 9	of 9
209	323	11	11	6.66E-03
For Julian Day 323,	selecting	COMIDA2	results # 9	of 9

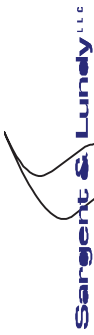


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-88 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

210	324	4	13	4.57E-04			
For Julian Day 324,	selecting	COMIDA2	results #	9 of 9			
211	324	18	9	8.75E-04			
For Julian Day 324,	selecting	COMIDA2	results #	9 of 9			
212	324	21	13	4.57E-04			
For Julian Day 324,	selecting	COMIDA2	results #	9 of 9			
213	325	18	24	1.14E-04			
For Julian Day 325,	selecting	COMIDA2	results #	9 of 9			
214	325	19	23	1.14E-04			
For Julian Day 325,	selecting	COMIDA2	results #	9 of 9			
215	326	8	5	6.36E-03			
For Julian Day 326,	selecting	COMIDA2	results #	9 of 9			
216	326	17	21	2.40E-03			
For Julian Day 326,	selecting	COMIDA2	results #	9 of 9			
217	326	21	20	3.17E-03			
For Julian Day 326,	selecting	COMIDA2	results #	9 of 9			
218	327	3	19	9.51E-04			
For Julian Day 327,	selecting	COMIDA2	results #	9 of 9			
219	327	18	17	3.45E-03			
For Julian Day 327,	selecting	COMIDA2	results #	9 of 9			
220	328	13	4	3.11E-03			
For Julian Day 328,	selecting	COMIDA2	results #	9 of 9			
221	328	24	21	2.40E-03			
For Julian Day 328,	selecting	COMIDA2	results #	9 of 9			
222	330	20	8	2.64E-03			
For Julian Day 330,	selecting	COMIDA2	results #	9 of 9			
223	331	17	6	1.22E-02			
For Julian Day 331,	selecting	COMIDA2	results #	9 of 9			
224	333	5	32	3.61E-04			
For Julian Day 333,	selecting	COMIDA2	results #	9 of 9			
225	333	6	27	2.76E-04			
For Julian Day 333,	selecting	COMIDA2	results #	9 of 9			
226	333	8	17	3.45E-03			
For Julian Day 333,	selecting	COMIDA2	results #	9 of 9			
227	335	4	9	8.75E-04			



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-89 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 335, selecting COMIDA2 results # 1 of 9
 228 335 7 15 2.97E-03

For Julian Day 335, selecting COMIDA2 results # 1 of 9
 229 336 1 20 3.17E-03

For Julian Day 336, selecting COMIDA2 results # 1 of 9
 230 336 15 8 2.64E-03

For Julian Day 336, selecting COMIDA2 results # 1 of 9
 231 338 1 14 2.25E-03

For Julian Day 338, selecting COMIDA2 results # 1 of 9
 232 338 8 12 1.27E-02

For Julian Day 338, selecting COMIDA2 results # 1 of 9
 233 342 8 22 7.23E-04

For Julian Day 342, selecting COMIDA2 results # 1 of 9
 234 342 11 18 4.00E-04

For Julian Day 342, selecting COMIDA2 results # 1 of 9
 235 343 18 16 3.17E-03

For Julian Day 343, selecting COMIDA2 results # 1 of 9
 236 344 4 26 2.95E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 237 344 8 26 2.95E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 238 344 10 25 3.04E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 239 344 13 25 3.04E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 240 344 14 24 1.14E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 241 344 15 23 1.14E-04

For Julian Day 344, selecting COMIDA2 results # 1 of 9
 242 345 8 19 9.51E-04

For Julian Day 345, selecting COMIDA2 results # 1 of 9
 243 345 21 14 2.25E-03

For Julian Day 345, selecting COMIDA2 results # 1 of 9
 244 346 10 18 4.00E-04

For Julian Day 346, selecting COMIDA2 results # 1 of 9



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

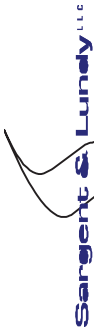
Rev. 2 Date

Safety Related Non-Safety Related

Page 1.5-90 of 1.5-374

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

TRIAL	DAY	HOUR	BIN	PRBMET
245	349	14	2	3.82E-03
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9	
246	349	17	7	7.65E-03
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9	
247	350	24	11	6.66E-03
For Julian Day 350,	selecting	COMIDA2	results # 1 of 9	
248	352	22	10	4.33E-03
For Julian Day 352,	selecting	COMIDA2	results # 1 of 9	
249	353	17	10	4.33E-03
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9	
250	353	24	21	2.40E-03
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9	
251	356	21	15	2.97E-03
For Julian Day 356,	selecting	COMIDA2	results # 1 of 9	
252	358	6	16	3.17E-03
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9	
253	358	22	12	1.27E-02
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9	
254	363	22	7	7.65E-03
For Julian Day 363,	selecting	COMIDA2	results # 1 of 9	
255	365	4	13	4.57E-04
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9	
256	365	9	13	4.57E-04
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9	
257	2	7	19	9.51E-04
For Julian Day 2,	selecting	COMIDA2	results # 1 of 9	
258	3	11	14	2.25E-03
For Julian Day 3,	selecting	COMIDA2	results # 1 of 9	
259	5	19	11	6.66E-03
For Julian Day 5,	selecting	COMIDA2	results # 1 of 9	
260	6	9	6	1.22E-02
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9	



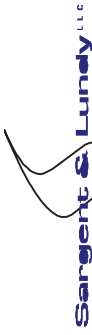
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-91 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

261	6	17	8	2.64E-03
For Julian Day	6,	selecting	COMIDA2	results # 1 of 9
262	10	13	2	3.82E-03
For Julian Day	10,	selecting	COMIDA2	results # 1 of 9
263	13	10	20	3.17E-03
For Julian Day	13,	selecting	COMIDA2	results # 1 of 9
264	16	2	8	2.64E-03
For Julian Day	16,	selecting	COMIDA2	results # 1 of 9
265	16	20	7	7.65E-03
For Julian Day	16,	selecting	COMIDA2	results # 1 of 9
266	18	10	17	3.45E-03
For Julian Day	18,	selecting	COMIDA2	results # 1 of 9
267	19	10	8	2.64E-03
For Julian Day	19,	selecting	COMIDA2	results # 1 of 9
268	20	9	6	1.22E-02
For Julian Day	20,	selecting	COMIDA2	results # 1 of 9
269	23	1	8	2.64E-03
For Julian Day	23,	selecting	COMIDA2	results # 1 of 9
270	24	4	3	3.14E-04
For Julian Day	24,	selecting	COMIDA2	results # 1 of 9
271	24	15	7	7.65E-03
For Julian Day	24,	selecting	COMIDA2	results # 1 of 9
272	25	14	20	3.17E-03
For Julian Day	25,	selecting	COMIDA2	results # 1 of 9
273	25	20	19	9.51E-04
For Julian Day	25,	selecting	COMIDA2	results # 1 of 9
274	25	21	18	4.00E-04
For Julian Day	25,	selecting	COMIDA2	results # 1 of 9
275	26	2	17	3.45E-03
For Julian Day	26,	selecting	COMIDA2	results # 1 of 9
276	33	17	9	8.75E-04
For Julian Day	33,	selecting	COMIDA2	results # 2 of 9
277	33	19	15	2.97E-03
For Julian Day	33,	selecting	COMIDA2	results # 2 of 9
278	36	23	18	4.00E-04



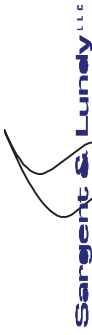
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-92 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 279	36,	selecting	COMIDA2	results # 2	of 9
280	37	17	22	7.23E-04	
281	37,	selecting	COMIDA2	results # 2	of 9
282	39	17	6	1.22E-02	
283	39,	selecting	COMIDA2	results # 2	of 9
284	40	22	16	3.17E-03	
285	40,	selecting	COMIDA2	results # 2	of 9
286	42	5	12	1.27E-02	
287	42,	selecting	COMIDA2	results # 2	of 9
288	42	23	13	4.57E-04	
289	42,	selecting	COMIDA2	results # 2	of 9
290	43	8	9	8.75E-04	
291	43,	selecting	COMIDA2	results # 2	of 9
292	44	6	11	6.66E-03	
293	44,	selecting	COMIDA2	results # 2	of 9
294	44	22	15	2.97E-03	
295	44,	selecting	COMIDA2	results # 2	of 9
296	46	20	12	1.27E-02	
297	46,	selecting	COMIDA2	results # 2	of 9
298	47	11	2	3.82E-03	
299	47,	selecting	COMIDA2	results # 2	of 9
300	47	17	5	6.36E-03	
301	47,	selecting	COMIDA2	results # 2	of 9
302	48	1	14	2.25E-03	
303	48,	selecting	COMIDA2	results # 2	of 9
304	48	14	4	3.11E-03	
305	48,	selecting	COMIDA2	results # 2	of 9
306	53	13	2	3.82E-03	
307	53,	selecting	COMIDA2	results # 2	of 9
308	53	17	7	7.65E-03	
309	53,	selecting	COMIDA2	results # 2	of 9
310	55	5	21	2.40E-03	
311	55,	selecting	COMIDA2	results # 2	of 9
312	62	9	16	3.17E-03	
313	62,	selecting	COMIDA2	results # 2	of 9



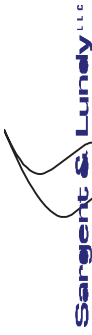
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-93 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related
296	62	23	16 3.17E-03
For Julian Day 62,	selecting COMIDA2 results # 2 of 9		
297	63	19	14 2.25E-03
For Julian Day 63,	selecting COMIDA2 results # 2 of 9		
298	64	1	15 2.97E-03
For Julian Day 64,	selecting COMIDA2 results # 2 of 9		
299	64	15	5 6.36E-03
For Julian Day 64,	selecting COMIDA2 results # 2 of 9		
300	66	6	27 2.76E-04
For Julian Day 66,	selecting COMIDA2 results # 2 of 9		

TRIAL	DAY	HOUR	BIN	PRBMET
301	66	7	32	3.61E-04
For Julian Day 66,	selecting COMIDA2 results # 2 of 9			
302	66	8	22	7.23E-04
For Julian Day 66,	selecting COMIDA2 results # 2 of 9			
303	66	12	35	2.47E-04
For Julian Day 66,	selecting COMIDA2 results # 2 of 9			
304	68	19	10	4.33E-03
For Julian Day 68,	selecting COMIDA2 results # 2 of 9			
305	69	15	1	2.47E-04
For Julian Day 69,	selecting COMIDA2 results # 2 of 9			
306	72	11	2	3.82E-03
For Julian Day 72,	selecting COMIDA2 results # 2 of 9			
307	74	8	10	4.33E-03
For Julian Day 74,	selecting COMIDA2 results # 2 of 9			
308	75	24	21	2.40E-03
For Julian Day 75,	selecting COMIDA2 results # 2 of 9			
309	76	6	19	9.51E-04
For Julian Day 76,	selecting COMIDA2 results # 2 of 9			
310	78	6	3	3.14E-04
For Julian Day 78,	selecting COMIDA2 results # 2 of 9			
311	79	2	22	7.23E-04
For Julian Day 79,	selecting COMIDA2 results # 2 of 9			



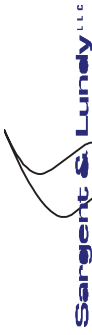
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-94 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

312	For Julian Day 79,	6	17	3.45E-03 results # 2 of 9
313	80,	2	11	6.66E-03 results # 2 of 9
314	80,	5	13	4.57E-04 results # 2 of 9
315	80,	19	8	2.64E-03 results # 2 of 9
	81,	24	18	4.00E-04 results # 2 of 9
316	84,	3	17	3.45E-03 results # 2 of 9
317	85,	13	12	1.27E-02 results # 2 of 9
318	86,	7	20	3.17E-03 results # 2 of 9
319	87,	13	1	2.47E-04 results # 2 of 9
320	89,	19	19	9.51E-04 results # 2 of 9
321	90,	2	20	3.17E-03 results # 2 of 9
322	91,	1	19	9.51E-04 results # 2 of 9
323	94,	20	8	2.64E-03 results # 3 of 9
324	95,	21	12	1.27E-02 results # 3 of 9
325	96,	11	2	3.82E-03 results # 3 of 9
326	97,	24	15	2.97E-03 results # 3 of 9
327	97,	5	14	2.25E-03 results # 3 of 9
328	98,	8	15	2.97E-03 results # 3 of 9
329				



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-95 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 98,	98,	selecting	COMIDA2	results # 3 of 9
330	13	2	3.82E-03	
For Julian Day 98,	98,	selecting	COMIDA2	results # 3 of 9
331	8	21	2.40E-03	
For Julian Day 99,	99,	selecting	COMIDA2	results # 3 of 9
332	23	18	4.00E-04	
For Julian Day 99,	99,	selecting	COMIDA2	results # 3 of 9
333	100	19	6	1.22E-02
For Julian Day 100,	100,	selecting	COMIDA2	results # 3 of 9
334	100	22	16	3.17E-03
For Julian Day 100,	100,	selecting	COMIDA2	results # 3 of 9
335	102	8	20	3.17E-03
For Julian Day 102,	102,	selecting	COMIDA2	results # 3 of 9
336	102	12	7	7.65E-03
For Julian Day 102,	102,	selecting	COMIDA2	results # 3 of 9
337	104	14	35	2.47E-04
For Julian Day 104,	104,	selecting	COMIDA2	results # 3 of 9
338	104	17	22	7.23E-04
For Julian Day 104,	104,	selecting	COMIDA2	results # 3 of 9
339	104	19	32	3.61E-04
For Julian Day 104,	104,	selecting	COMIDA2	results # 3 of 9
340	105	2	21	2.40E-03
For Julian Day 105,	105,	selecting	COMIDA2	results # 3 of 9
341	105	12	17	3.45E-03
For Julian Day 105,	105,	selecting	COMIDA2	results # 3 of 9
342	105	14	26	2.95E-04
For Julian Day 105,	105,	selecting	COMIDA2	results # 3 of 9
343	107	11	1	2.47E-04
For Julian Day 107,	107,	selecting	COMIDA2	results # 3 of 9
344	107	13	1	2.47E-04
For Julian Day 107,	107,	selecting	COMIDA2	results # 3 of 9
345	109	18	16	3.17E-03
For Julian Day 109,	109,	selecting	COMIDA2	results # 3 of 9
346	110	3	13	4.57E-04
For Julian Day 110,	110,	selecting	COMIDA2	results # 3 of 9



Calcs. For **ENVIRONMENTAL CONSEQUENCE**

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

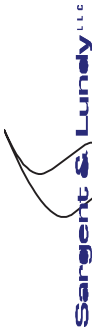
Safety Related X Non-Safety Related

Page 1.5-96 of 1.5-374

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

347 110 7 14 2.25E-03
 For Julian Day 110, selecting COMIDA2 results # 3 of 9
 348 112 7 5 6.36E-03
 For Julian Day 112, selecting COMIDA2 results # 3 of 9
 349 114 2 9 8.75E-04
 For Julian Day 114, selecting COMIDA2 results # 3 of 9
 350 114 14 31 2.85E-04
 For Julian Day 114, selecting COMIDA2 results # 3 of 9

TRIAL	DAY	HOUR	BIN	PRBMET
351	114	15	31	2.85E-04
For Julian Day 114, selecting COMIDA2 results # 3 of 9				
352	114	18	30	2.57E-04
For Julian Day 114, selecting COMIDA2 results # 3 of 9				
353	114	19	29	1.14E-04
For Julian Day 114, selecting COMIDA2 results # 3 of 9				
354	114	20	27	2.76E-04
For Julian Day 114, selecting COMIDA2 results # 3 of 9				
355	114	24	4	3.11E-03
For Julian Day 114, selecting COMIDA2 results # 3 of 9				
356	116	22	8	2.64E-03
For Julian Day 116, selecting COMIDA2 results # 3 of 9				
357	117	1	25	3.04E-04
For Julian Day 117, selecting COMIDA2 results # 3 of 9				
358	117	17	22	7.23E-04
For Julian Day 117, selecting COMIDA2 results # 3 of 9				
359	123	18	16	3.17E-03
For Julian Day 123, selecting COMIDA2 results # 3 of 9				
360	124	6	17	3.45E-03
For Julian Day 124, selecting COMIDA2 results # 3 of 9				
361	124	10	20	3.17E-03
For Julian Day 124, selecting COMIDA2 results # 3 of 9				
362	125	15	2	3.82E-03
For Julian Day 125, selecting COMIDA2 results # 3 of 9				



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-97 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

363	125	17	6	1.22E-02		
For Julian Day 125,	selecting	COMIDA2	results # 3	of 9		
364	127	11	1	2.47E-04		
For Julian Day 127,	selecting	COMIDA2	results # 3	of 9		
365	128	11	21	2.40E-03		
For Julian Day 128,	selecting	COMIDA2	results # 3	of 9		
366	128	14	18	4.00E-04		
For Julian Day 128,	selecting	COMIDA2	results # 3	of 9		
367	130	17	36	2.19E-04		
For Julian Day 130,	selecting	COMIDA2	results # 3	of 9		
368	130	19	35	2.47E-04		
For Julian Day 130,	selecting	COMIDA2	results # 3	of 9		
369	130	22	35	2.47E-04		
For Julian Day 130,	selecting	COMIDA2	results # 3	of 9		
370	130	23	34	1.14E-04		
For Julian Day 130,	selecting	COMIDA2	results # 3	of 9		
371	131	1	34	1.14E-04		
For Julian Day 131,	selecting	COMIDA2	results # 3	of 9		
372	132	5	10	4.33E-03		
For Julian Day 132,	selecting	COMIDA2	results # 3	of 9		
373	132	23	31	2.85E-04		
For Julian Day 132,	selecting	COMIDA2	results # 3	of 9		
374	133	2	31	2.85E-04		
For Julian Day 133,	selecting	COMIDA2	results # 3	of 9		
375	133	4	30	2.57E-04		
For Julian Day 133,	selecting	COMIDA2	results # 3	of 9		
376	133	8	30	2.57E-04		
For Julian Day 133,	selecting	COMIDA2	results # 3	of 9		
377	133	9	29	1.14E-04		
For Julian Day 133,	selecting	COMIDA2	results # 3	of 9		
378	133	10	28	1.14E-04		
For Julian Day 133,	selecting	COMIDA2	results # 3	of 9		
379	137	9	3	3.14E-04		
For Julian Day 137,	selecting	COMIDA2	results # 4	of 9		
380	137	21	11	6.66E-03		



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-100 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 174,	selecting COMIDA2 results	# 5 of 9
For Julian Day 174,	selecting COMIDA2 results	# 5 of 9
For Julian Day 174,	selecting COMIDA2 results	# 5 of 9
For Julian Day 177,	selecting COMIDA2 results	# 5 of 9
For Julian Day 177,	selecting COMIDA2 results	# 5 of 9
For Julian Day 177,	selecting COMIDA2 results	# 5 of 9
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9
For Julian Day 185,	selecting COMIDA2 results	# 5 of 9
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9
For Julian Day 189,	selecting COMIDA2 results	# 5 of 9
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 198,	selecting COMIDA2 results	# 6 of 9
For Julian Day 200,	selecting COMIDA2 results	# 6 of 9
For Julian Day 202,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 206,	selecting COMIDA2 results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-101 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 229,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-102 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting	COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-104 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-105 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 333,	selecting	COMIDA2	results	# 9	of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9	of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1	of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.5-106 of 1.5-374

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-107 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 62,	selecting COMIDA2 results	# 2 of 9
For Julian Day 62,	selecting COMIDA2 results	# 2 of 9
For Julian Day 63,	selecting COMIDA2 results	# 2 of 9
For Julian Day 64,	selecting COMIDA2 results	# 2 of 9
For Julian Day 64,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 68,	selecting COMIDA2 results	# 2 of 9
For Julian Day 69,	selecting COMIDA2 results	# 2 of 9
For Julian Day 72,	selecting COMIDA2 results	# 2 of 9
For Julian Day 74,	selecting COMIDA2 results	# 2 of 9
For Julian Day 75,	selecting COMIDA2 results	# 2 of 9
For Julian Day 76,	selecting COMIDA2 results	# 2 of 9
For Julian Day 78,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 81,	selecting COMIDA2 results	# 2 of 9
For Julian Day 84,	selecting COMIDA2 results	# 2 of 9
For Julian Day 85,	selecting COMIDA2 results	# 2 of 9
For Julian Day 86,	selecting COMIDA2 results	# 2 of 9
For Julian Day 87,	selecting COMIDA2 results	# 2 of 9
For Julian Day 89,	selecting COMIDA2 results	# 2 of 9
For Julian Day 90,	selecting COMIDA2 results	# 2 of 9
For Julian Day 91,	selecting COMIDA2 results	# 2 of 9
For Julian Day 94,	selecting COMIDA2 results	# 3 of 9
For Julian Day 95,	selecting COMIDA2 results	# 3 of 9
For Julian Day 96,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-108 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 109,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-110 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 155,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 158,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 168,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-111 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-112 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 200,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting	COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-115 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 297,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 301,	selecting	COMIDA2	results # 9 of 9
For Julian Day 302,	selecting	COMIDA2	results # 9 of 9
For Julian Day 304,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 313,	selecting	COMIDA2	results # 9 of 9
For Julian Day 314,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 317,	selecting	COMIDA2	results # 9 of 9
For Julian Day 318,	selecting	COMIDA2	results # 9 of 9
For Julian Day 321,	selecting	COMIDA2	results # 9 of 9
For Julian Day 323,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 325,	selecting	COMIDA2	results # 9 of 9
For Julian Day 325,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 327,	selecting	COMIDA2	results # 9 of 9
For Julian Day 327,	selecting	COMIDA2	results # 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-116 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.5-117 of 1.5-374

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 365, selecting COMIDA2 results # 1 of 9
 For Julian Day 365, selecting COMIDA2 results # 1 of 9
 For Julian Day 2, selecting COMIDA2 results # 1 of 9
 For Julian Day 3, selecting COMIDA2 results # 1 of 9
 For Julian Day 5, selecting COMIDA2 results # 1 of 9
 For Julian Day 6, selecting COMIDA2 results # 1 of 9
 For Julian Day 6, selecting COMIDA2 results # 1 of 9
 For Julian Day 10, selecting COMIDA2 results # 1 of 9
 For Julian Day 13, selecting COMIDA2 results # 1 of 9
 For Julian Day 16, selecting COMIDA2 results # 1 of 9
 For Julian Day 16, selecting COMIDA2 results # 1 of 9
 For Julian Day 18, selecting COMIDA2 results # 1 of 9
 For Julian Day 19, selecting COMIDA2 results # 1 of 9
 For Julian Day 20, selecting COMIDA2 results # 1 of 9
 For Julian Day 23, selecting COMIDA2 results # 1 of 9
 For Julian Day 24, selecting COMIDA2 results # 1 of 9
 For Julian Day 24, selecting COMIDA2 results # 1 of 9
 For Julian Day 25, selecting COMIDA2 results # 1 of 9
 For Julian Day 25, selecting COMIDA2 results # 1 of 9
 For Julian Day 25, selecting COMIDA2 results # 1 of 9
 For Julian Day 26, selecting COMIDA2 results # 1 of 9
 For Julian Day 33, selecting COMIDA2 results # 2 of 9
 For Julian Day 33, selecting COMIDA2 results # 2 of 9
 For Julian Day 36, selecting COMIDA2 results # 2 of 9
 For Julian Day 37, selecting COMIDA2 results # 2 of 9
 For Julian Day 39, selecting COMIDA2 results # 2 of 9
 For Julian Day 40, selecting COMIDA2 results # 2 of 9
 For Julian Day 42, selecting COMIDA2 results # 2 of 9
 For Julian Day 42, selecting COMIDA2 results # 2 of 9
 For Julian Day 43, selecting COMIDA2 results # 2 of 9
 For Julian Day 44, selecting COMIDA2 results # 2 of 9
 For Julian Day 44, selecting COMIDA2 results # 2 of 9
 For Julian Day 46, selecting COMIDA2 results # 2 of 9
 For Julian Day 47, selecting COMIDA2 results # 2 of 9
 For Julian Day 47, selecting COMIDA2 results # 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-118 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-119 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 96,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 105,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 107,	selecting COMIDA2 results	# 3 of 9
For Julian Day 109,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 110,	selecting COMIDA2 results	# 3 of 9
For Julian Day 112,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 116,	selecting COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9
For Julian Day 123,	selecting COMIDA2 results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-120 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 124,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 127,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 131,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 141,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 143,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 144,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 147,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 148,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 149,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-123 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9
For Julian Day 198,	selecting COMIDA2 results	# 6 of 9
For Julian Day 200,	selecting COMIDA2 results	# 6 of 9
For Julian Day 202,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9
For Julian Day 206,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 211,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 218,	selecting COMIDA2 results	# 6 of 9
For Julian Day 218,	selecting COMIDA2 results	# 6 of 9
For Julian Day 223,	selecting COMIDA2 results	# 7 of 9
For Julian Day 224,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-125 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 271,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 272,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 274,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 275,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 276,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 277,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 278,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 280,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting	COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-126 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 289,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 297,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-127 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-128 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-129 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-131 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-132 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 149,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 154,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 155,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 158,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-134 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-137 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 281,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 282,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 285,	selecting COMIDA2	results	# 8 of 9
For Julian Day 289,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 292,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 293,	selecting COMIDA2	results	# 9 of 9
For Julian Day 297,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 299,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-138 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-139 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.5-140 of 1.5-374

Safety Related	X	Non-Safety Related
Prepared by		
Reviewed by		
Approved by		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-141 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 81,	selecting COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 109,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-142 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 114,	selecting COMIDA2 results	# 3 of 9
For Julian Day 116,	selecting COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9
For Julian Day 117,	selecting COMIDA2 results	# 3 of 9
For Julian Day 123,	selecting COMIDA2 results	# 3 of 9
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9
For Julian Day 124,	selecting COMIDA2 results	# 3 of 9
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9
For Julian Day 125,	selecting COMIDA2 results	# 3 of 9
For Julian Day 127,	selecting COMIDA2 results	# 3 of 9
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9
For Julian Day 128,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 130,	selecting COMIDA2 results	# 3 of 9
For Julian Day 131,	selecting COMIDA2 results	# 3 of 9
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9
For Julian Day 141,	selecting COMIDA2 results	# 4 of 9
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9
For Julian Day 143,	selecting COMIDA2 results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-145 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-147 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 243,	selecting	COMIDA2	results # 7 of 9
For Julian Day 243,	selecting	COMIDA2	results # 7 of 9
For Julian Day 245,	selecting	COMIDA2	results # 7 of 9
For Julian Day 248,	selecting	COMIDA2	results # 7 of 9
For Julian Day 250,	selecting	COMIDA2	results # 7 of 9
For Julian Day 251,	selecting	COMIDA2	results # 7 of 9
For Julian Day 253,	selecting	COMIDA2	results # 7 of 9
For Julian Day 253,	selecting	COMIDA2	results # 7 of 9
For Julian Day 254,	selecting	COMIDA2	results # 7 of 9
For Julian Day 254,	selecting	COMIDA2	results # 7 of 9
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9
For Julian Day 255,	selecting	COMIDA2	results # 7 of 9
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9
For Julian Day 260,	selecting	COMIDA2	results # 8 of 9
For Julian Day 263,	selecting	COMIDA2	results # 8 of 9
For Julian Day 264,	selecting	COMIDA2	results # 8 of 9
For Julian Day 266,	selecting	COMIDA2	results # 8 of 9
For Julian Day 269,	selecting	COMIDA2	results # 8 of 9
For Julian Day 269,	selecting	COMIDA2	results # 8 of 9
For Julian Day 270,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 271,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 275,	selecting	COMIDA2	results # 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-149 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-150 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 344,	selecting	COMIDA2	results # 1 of 9
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9
For Julian Day 345,	selecting	COMIDA2	results # 1 of 9
For Julian Day 345,	selecting	COMIDA2	results # 1 of 9
For Julian Day 346,	selecting	COMIDA2	results # 1 of 9
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9
For Julian Day 350,	selecting	COMIDA2	results # 1 of 9
For Julian Day 352,	selecting	COMIDA2	results # 1 of 9
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9
For Julian Day 356,	selecting	COMIDA2	results # 1 of 9
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9
For Julian Day 363,	selecting	COMIDA2	results # 1 of 9
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9
For Julian Day 2,	selecting	COMIDA2	results # 1 of 9
For Julian Day 3,	selecting	COMIDA2	results # 1 of 9
For Julian Day 5,	selecting	COMIDA2	results # 1 of 9
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9
For Julian Day 10,	selecting	COMIDA2	results # 1 of 9
For Julian Day 13,	selecting	COMIDA2	results # 1 of 9
For Julian Day 16,	selecting	COMIDA2	results # 1 of 9
For Julian Day 16,	selecting	COMIDA2	results # 1 of 9
For Julian Day 18,	selecting	COMIDA2	results # 1 of 9
For Julian Day 19,	selecting	COMIDA2	results # 1 of 9
For Julian Day 20,	selecting	COMIDA2	results # 1 of 9
For Julian Day 23,	selecting	COMIDA2	results # 1 of 9
For Julian Day 24,	selecting	COMIDA2	results # 1 of 9
For Julian Day 24,	selecting	COMIDA2	results # 1 of 9
For Julian Day 25,	selecting	COMIDA2	results # 1 of 9
For Julian Day 25,	selecting	COMIDA2	results # 1 of 9
For Julian Day 25,	selecting	COMIDA2	results # 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-151 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 26,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2	of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2	of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-152 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-153 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 109,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-154 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 152,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 153,	selecting COMIDA2	results	# 4 of 9
For Julian Day 154,	selecting COMIDA2	results	# 4 of 9
For Julian Day 155,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 158,	selecting COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-155 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting	COMIDA2	results	# 4 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 167,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 168,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-156 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting	COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting	COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting	COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-159 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 272,	selecting	COMIDA2	results # 8 of 9
For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 274,	selecting	COMIDA2	results # 8 of 9
For Julian Day 275,	selecting	COMIDA2	results # 8 of 9
For Julian Day 276,	selecting	COMIDA2	results # 8 of 9
For Julian Day 276,	selecting	COMIDA2	results # 8 of 9
For Julian Day 277,	selecting	COMIDA2	results # 8 of 9
For Julian Day 278,	selecting	COMIDA2	results # 8 of 9
For Julian Day 280,	selecting	COMIDA2	results # 8 of 9
For Julian Day 281,	selecting	COMIDA2	results # 8 of 9
For Julian Day 281,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 282,	selecting	COMIDA2	results # 8 of 9
For Julian Day 285,	selecting	COMIDA2	results # 8 of 9
For Julian Day 285,	selecting	COMIDA2	results # 8 of 9
For Julian Day 289,	selecting	COMIDA2	results # 9 of 9
For Julian Day 292,	selecting	COMIDA2	results # 9 of 9
For Julian Day 292,	selecting	COMIDA2	results # 9 of 9
For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 297,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 301,	selecting	COMIDA2	results # 9 of 9
For Julian Day 302,	selecting	COMIDA2	results # 9 of 9
For Julian Day 304,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 313,	selecting	COMIDA2	results # 9 of 9
For Julian Day 314,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-160 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 315,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 317,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 318,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 321,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 323,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 324,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 325,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 326,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 327,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 328,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 330,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 331,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 333,	selecting COMIDA2 results	# 9 of 9	
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 335,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 336,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 338,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9	
For Julian Day 342,	selecting COMIDA2 results	# 1 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-161 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-162 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-163 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 69,	selecting COMIDA2 results	# 2 of 9
For Julian Day 72,	selecting COMIDA2 results	# 2 of 9
For Julian Day 74,	selecting COMIDA2 results	# 2 of 9
For Julian Day 75,	selecting COMIDA2 results	# 2 of 9
For Julian Day 76,	selecting COMIDA2 results	# 2 of 9
For Julian Day 78,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 81,	selecting COMIDA2 results	# 2 of 9
For Julian Day 84,	selecting COMIDA2 results	# 2 of 9
For Julian Day 85,	selecting COMIDA2 results	# 2 of 9
For Julian Day 86,	selecting COMIDA2 results	# 2 of 9
For Julian Day 87,	selecting COMIDA2 results	# 2 of 9
For Julian Day 89,	selecting COMIDA2 results	# 2 of 9
For Julian Day 90,	selecting COMIDA2 results	# 2 of 9
For Julian Day 91,	selecting COMIDA2 results	# 2 of 9
For Julian Day 94,	selecting COMIDA2 results	# 3 of 9
For Julian Day 95,	selecting COMIDA2 results	# 3 of 9
For Julian Day 96,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 99,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 100,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 102,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9
For Julian Day 104,	selecting COMIDA2 results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-164 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 105,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 105,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 105,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 107,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 107,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 109,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 110,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 110,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 112,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 114,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 116,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 117,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 117,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 123,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 124,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 124,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 125,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 125,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 127,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 128,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 128,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 130,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 130,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 130,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 130,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 131,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 132,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 132,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	
For Julian Day 133,	selecting COMIDA2 results # 3 of 9	results # 3 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-165 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 133,	selecting	COMIDA2	results # 3 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 137,	selecting	COMIDA2	results # 4 of 9
For Julian Day 141,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 142,	selecting	COMIDA2	results # 4 of 9
For Julian Day 143,	selecting	COMIDA2	results # 4 of 9
For Julian Day 144,	selecting	COMIDA2	results # 4 of 9
For Julian Day 146,	selecting	COMIDA2	results # 4 of 9
For Julian Day 146,	selecting	COMIDA2	results # 4 of 9
For Julian Day 147,	selecting	COMIDA2	results # 4 of 9
For Julian Day 148,	selecting	COMIDA2	results # 4 of 9
For Julian Day 149,	selecting	COMIDA2	results # 4 of 9
For Julian Day 152,	selecting	COMIDA2	results # 4 of 9
For Julian Day 152,	selecting	COMIDA2	results # 4 of 9
For Julian Day 152,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 153,	selecting	COMIDA2	results # 4 of 9
For Julian Day 154,	selecting	COMIDA2	results # 4 of 9
For Julian Day 155,	selecting	COMIDA2	results # 4 of 9
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9
For Julian Day 156,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 157,	selecting	COMIDA2	results # 4 of 9
For Julian Day 158,	selecting	COMIDA2	results # 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-167 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 177,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 180,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 183,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 185,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 186,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 187,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 189,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 190,	selecting COMIDA2 results	# 5 of 9	
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 194,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 196,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 198,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 200,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 202,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 204,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 206,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9	
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-168 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 211,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 218,	selecting COMIDA2 results	# 6 of 9
For Julian Day 218,	selecting COMIDA2 results	# 6 of 9
For Julian Day 218,	selecting COMIDA2 results	# 6 of 9
For Julian Day 223,	selecting COMIDA2 results	# 7 of 9
For Julian Day 224,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 227,	selecting COMIDA2 results	# 7 of 9
For Julian Day 228,	selecting COMIDA2 results	# 7 of 9
For Julian Day 228,	selecting COMIDA2 results	# 7 of 9
For Julian Day 228,	selecting COMIDA2 results	# 7 of 9
For Julian Day 229,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 231,	selecting COMIDA2 results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-169 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 231,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 231,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 231,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 234,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 235,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 236,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 238,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 243,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 243,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 243,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 243,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 243,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 243,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 245,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 248,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 250,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 251,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 253,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 253,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 254,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 254,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 255,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 255,	selecting COMIDA2 results	# 7 of 9	
For Julian Day 260,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 260,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 263,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 264,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 266,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 269,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 269,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 270,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 271,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 271,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 271,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 271,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 271,	selecting COMIDA2 results	# 8 of 9	
For Julian Day 272,	selecting COMIDA2 results	# 8 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-170 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 272,	selecting COMIDA2 results	# 8 of 9
For Julian Day 272,	selecting COMIDA2 results	# 8 of 9
For Julian Day 272,	selecting COMIDA2 results	# 8 of 9
For Julian Day 272,	selecting COMIDA2 results	# 8 of 9
For Julian Day 272,	selecting COMIDA2 results	# 8 of 9
For Julian Day 272,	selecting COMIDA2 results	# 8 of 9
For Julian Day 272,	selecting COMIDA2 results	# 8 of 9
For Julian Day 274,	selecting COMIDA2 results	# 8 of 9
For Julian Day 274,	selecting COMIDA2 results	# 8 of 9
For Julian Day 275,	selecting COMIDA2 results	# 8 of 9
For Julian Day 276,	selecting COMIDA2 results	# 8 of 9
For Julian Day 276,	selecting COMIDA2 results	# 8 of 9
For Julian Day 277,	selecting COMIDA2 results	# 8 of 9
For Julian Day 278,	selecting COMIDA2 results	# 8 of 9
For Julian Day 280,	selecting COMIDA2 results	# 8 of 9
For Julian Day 281,	selecting COMIDA2 results	# 8 of 9
For Julian Day 281,	selecting COMIDA2 results	# 8 of 9
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9
For Julian Day 282,	selecting COMIDA2 results	# 8 of 9
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9
For Julian Day 285,	selecting COMIDA2 results	# 8 of 9
For Julian Day 289,	selecting COMIDA2 results	# 9 of 9
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9
For Julian Day 292,	selecting COMIDA2 results	# 9 of 9
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9
For Julian Day 293,	selecting COMIDA2 results	# 9 of 9
For Julian Day 297,	selecting COMIDA2 results	# 9 of 9
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9
For Julian Day 299,	selecting COMIDA2 results	# 9 of 9
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9
For Julian Day 300,	selecting COMIDA2 results	# 9 of 9
For Julian Day 301,	selecting COMIDA2 results	# 9 of 9
For Julian Day 302,	selecting COMIDA2 results	# 9 of 9
For Julian Day 304,	selecting COMIDA2 results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-171 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 309,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Page 1.5-172 of 1.5-374

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

	Safety Related	Non-Safety Related	
For Julian Day 336,	selecting	COMIDA2	results # 1 of 9
For Julian Day 338,	selecting	COMIDA2	results # 1 of 9
For Julian Day 338,	selecting	COMIDA2	results # 1 of 9
For Julian Day 342,	selecting	COMIDA2	results # 1 of 9
For Julian Day 342,	selecting	COMIDA2	results # 1 of 9
For Julian Day 343,	selecting	COMIDA2	results # 1 of 9
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9
For Julian Day 344,	selecting	COMIDA2	results # 1 of 9
For Julian Day 345,	selecting	COMIDA2	results # 1 of 9
For Julian Day 345,	selecting	COMIDA2	results # 1 of 9
For Julian Day 346,	selecting	COMIDA2	results # 1 of 9
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9
For Julian Day 349,	selecting	COMIDA2	results # 1 of 9
For Julian Day 350,	selecting	COMIDA2	results # 1 of 9
For Julian Day 352,	selecting	COMIDA2	results # 1 of 9
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9
For Julian Day 353,	selecting	COMIDA2	results # 1 of 9
For Julian Day 356,	selecting	COMIDA2	results # 1 of 9
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9
For Julian Day 358,	selecting	COMIDA2	results # 1 of 9
For Julian Day 363,	selecting	COMIDA2	results # 1 of 9
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9
For Julian Day 365,	selecting	COMIDA2	results # 1 of 9
For Julian Day 2,	selecting	COMIDA2	results # 1 of 9
For Julian Day 3,	selecting	COMIDA2	results # 1 of 9
For Julian Day 5,	selecting	COMIDA2	results # 1 of 9
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9
For Julian Day 6,	selecting	COMIDA2	results # 1 of 9
For Julian Day 10,	selecting	COMIDA2	results # 1 of 9
For Julian Day 13,	selecting	COMIDA2	results # 1 of 9
For Julian Day 16,	selecting	COMIDA2	results # 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.5-173 of 1.5-374

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-174 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 96,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting	COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-175 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 109,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-176 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 130,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 131,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 132,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 133,	selecting COMIDA2 results	# 3 of 9	
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 137,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 141,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 142,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 143,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 144,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 146,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 147,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 148,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 149,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 152,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 153,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 154,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 155,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 156,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 156,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9	
For Julian Day 157,	selecting COMIDA2 results	# 4 of 9	



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-178 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9
For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-179 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 209,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 210,	selecting COMIDA2 results	# 6 of 9
For Julian Day 211,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 215,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 216,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 217,	selecting COMIDA2 results	# 6 of 9
For Julian Day 218,	selecting COMIDA2 results	# 6 of 9
For Julian Day 218,	selecting COMIDA2 results	# 6 of 9
For Julian Day 223,	selecting COMIDA2 results	# 7 of 9
For Julian Day 224,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 226,	selecting COMIDA2 results	# 7 of 9
For Julian Day 227,	selecting COMIDA2 results	# 7 of 9
For Julian Day 228,	selecting COMIDA2 results	# 7 of 9
For Julian Day 228,	selecting COMIDA2 results	# 7 of 9
For Julian Day 228,	selecting COMIDA2 results	# 7 of 9
For Julian Day 229,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9
For Julian Day 230,	selecting COMIDA2 results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-180 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 230,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 231,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 234,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 235,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 236,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 238,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 243,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 245,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 248,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 250,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 251,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 253,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 254,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 255,	selecting	COMIDA2	results	# 7 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 260,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 263,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 264,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 266,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 269,	selecting	COMIDA2	results	# 8 of 9
For Julian Day 270,	selecting	COMIDA2	results	# 8 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-182 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 300,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 300,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 301,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 302,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 304,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 309,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 313,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 314,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 315,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 317,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 318,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 321,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 323,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 324,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 325,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 326,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 327,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-183 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 333,	selecting	COMIDA2	results	# 9	of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9	of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1	of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1	of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-184 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-185 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 62,	selecting COMIDA2 results	# 2 of 9
For Julian Day 62,	selecting COMIDA2 results	# 2 of 9
For Julian Day 63,	selecting COMIDA2 results	# 2 of 9
For Julian Day 64,	selecting COMIDA2 results	# 2 of 9
For Julian Day 64,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 66,	selecting COMIDA2 results	# 2 of 9
For Julian Day 68,	selecting COMIDA2 results	# 2 of 9
For Julian Day 69,	selecting COMIDA2 results	# 2 of 9
For Julian Day 72,	selecting COMIDA2 results	# 2 of 9
For Julian Day 74,	selecting COMIDA2 results	# 2 of 9
For Julian Day 75,	selecting COMIDA2 results	# 2 of 9
For Julian Day 76,	selecting COMIDA2 results	# 2 of 9
For Julian Day 78,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 79,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 80,	selecting COMIDA2 results	# 2 of 9
For Julian Day 81,	selecting COMIDA2 results	# 2 of 9
For Julian Day 84,	selecting COMIDA2 results	# 2 of 9
For Julian Day 85,	selecting COMIDA2 results	# 2 of 9
For Julian Day 86,	selecting COMIDA2 results	# 2 of 9
For Julian Day 87,	selecting COMIDA2 results	# 2 of 9
For Julian Day 89,	selecting COMIDA2 results	# 2 of 9
For Julian Day 90,	selecting COMIDA2 results	# 2 of 9
For Julian Day 91,	selecting COMIDA2 results	# 2 of 9
For Julian Day 94,	selecting COMIDA2 results	# 3 of 9
For Julian Day 95,	selecting COMIDA2 results	# 3 of 9
For Julian Day 96,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 97,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9
For Julian Day 98,	selecting COMIDA2 results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-186 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 109,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X
Non-Safety Related	

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-188 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 155,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 156,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 157,	selecting COMIDA2	results	# 4 of 9
For Julian Day 158,	selecting COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting COMIDA2	results	# 4 of 9
For Julian Day 159,	selecting COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting COMIDA2	results	# 4 of 9
For Julian Day 160,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 162,	selecting COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting COMIDA2	results	# 4 of 9
For Julian Day 163,	selecting COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting COMIDA2	results	# 4 of 9
For Julian Day 166,	selecting COMIDA2	results	# 4 of 9
For Julian Day 167,	selecting COMIDA2	results	# 5 of 9
For Julian Day 167,	selecting COMIDA2	results	# 5 of 9
For Julian Day 168,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-189 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 169,	selecting COMIDA2	results	# 5 of 9
For Julian Day 173,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 174,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 177,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 180,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 183,	selecting COMIDA2	results	# 5 of 9
For Julian Day 185,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 186,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 187,	selecting COMIDA2	results	# 5 of 9
For Julian Day 189,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 190,	selecting COMIDA2	results	# 5 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 194,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 196,	selecting COMIDA2	results	# 6 of 9
For Julian Day 198,	selecting COMIDA2	results	# 6 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-190 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 200,	selecting COMIDA2	results	# 6 of 9
For Julian Day 202,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 204,	selecting COMIDA2	results	# 6 of 9
For Julian Day 206,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 209,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 210,	selecting COMIDA2	results	# 6 of 9
For Julian Day 211,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 215,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 216,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 217,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 218,	selecting COMIDA2	results	# 6 of 9
For Julian Day 223,	selecting COMIDA2	results	# 7 of 9
For Julian Day 224,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 226,	selecting COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting COMIDA2	results	# 7 of 9
For Julian Day 227,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9
For Julian Day 228,	selecting COMIDA2	results	# 7 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-193 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 293,	selecting	COMIDA2	results # 9 of 9
For Julian Day 297,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 299,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 300,	selecting	COMIDA2	results # 9 of 9
For Julian Day 301,	selecting	COMIDA2	results # 9 of 9
For Julian Day 302,	selecting	COMIDA2	results # 9 of 9
For Julian Day 304,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 309,	selecting	COMIDA2	results # 9 of 9
For Julian Day 313,	selecting	COMIDA2	results # 9 of 9
For Julian Day 314,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 315,	selecting	COMIDA2	results # 9 of 9
For Julian Day 317,	selecting	COMIDA2	results # 9 of 9
For Julian Day 318,	selecting	COMIDA2	results # 9 of 9
For Julian Day 321,	selecting	COMIDA2	results # 9 of 9
For Julian Day 323,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 324,	selecting	COMIDA2	results # 9 of 9
For Julian Day 325,	selecting	COMIDA2	results # 9 of 9
For Julian Day 325,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 326,	selecting	COMIDA2	results # 9 of 9
For Julian Day 327,	selecting	COMIDA2	results # 9 of 9
For Julian Day 327,	selecting	COMIDA2	results # 9 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-194 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 328,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 330,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 331,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 333,	selecting	COMIDA2	results	# 9 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 335,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 336,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 338,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 342,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 343,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 344,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 345,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 346,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 349,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 350,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 352,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 353,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 356,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 358,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 363,	selecting	COMIDA2	results	# 1 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-195 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 365,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 2,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 3,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 5,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 6,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 10,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 13,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 16,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 18,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 19,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 20,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 23,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 24,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 25,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 26,	selecting	COMIDA2	results	# 1 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 33,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 36,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 37,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 39,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 40,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 42,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 43,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 44,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 46,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9
For Julian Day 47,	selecting	COMIDA2	results	# 2 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-196 of 1.5-374

Client PSEG Nuclear Development	Safety Related X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

For Julian Day 48,	selecting COMIDA2	results	# 2 of 9
For Julian Day 48,	selecting COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting COMIDA2	results	# 2 of 9
For Julian Day 53,	selecting COMIDA2	results	# 2 of 9
For Julian Day 55,	selecting COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting COMIDA2	results	# 2 of 9
For Julian Day 62,	selecting COMIDA2	results	# 2 of 9
For Julian Day 63,	selecting COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting COMIDA2	results	# 2 of 9
For Julian Day 64,	selecting COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting COMIDA2	results	# 2 of 9
For Julian Day 66,	selecting COMIDA2	results	# 2 of 9
For Julian Day 68,	selecting COMIDA2	results	# 2 of 9
For Julian Day 69,	selecting COMIDA2	results	# 2 of 9
For Julian Day 72,	selecting COMIDA2	results	# 2 of 9
For Julian Day 74,	selecting COMIDA2	results	# 2 of 9
For Julian Day 75,	selecting COMIDA2	results	# 2 of 9
For Julian Day 76,	selecting COMIDA2	results	# 2 of 9
For Julian Day 78,	selecting COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting COMIDA2	results	# 2 of 9
For Julian Day 79,	selecting COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting COMIDA2	results	# 2 of 9
For Julian Day 80,	selecting COMIDA2	results	# 2 of 9
For Julian Day 81,	selecting COMIDA2	results	# 2 of 9
For Julian Day 84,	selecting COMIDA2	results	# 2 of 9
For Julian Day 85,	selecting COMIDA2	results	# 2 of 9
For Julian Day 86,	selecting COMIDA2	results	# 2 of 9
For Julian Day 87,	selecting COMIDA2	results	# 2 of 9
For Julian Day 89,	selecting COMIDA2	results	# 2 of 9
For Julian Day 90,	selecting COMIDA2	results	# 2 of 9
For Julian Day 91,	selecting COMIDA2	results	# 2 of 9
For Julian Day 94,	selecting COMIDA2	results	# 3 of 9
For Julian Day 95,	selecting COMIDA2	results	# 3 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X	Non-Safety Related
----------------	---	--------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-197 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 96,	selecting COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting COMIDA2	results	# 3 of 9
For Julian Day 97,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 98,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 99,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 100,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 102,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 104,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 105,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 107,	selecting COMIDA2	results	# 3 of 9
For Julian Day 109,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 110,	selecting COMIDA2	results	# 3 of 9
For Julian Day 112,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 114,	selecting COMIDA2	results	# 3 of 9
For Julian Day 116,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 117,	selecting COMIDA2	results	# 3 of 9
For Julian Day 123,	selecting COMIDA2	results	# 3 of 9



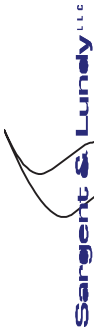
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-198 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 124,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 125,	selecting COMIDA2	results	# 3 of 9
For Julian Day 127,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 128,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 130,	selecting COMIDA2	results	# 3 of 9
For Julian Day 131,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 132,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 133,	selecting COMIDA2	results	# 3 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 137,	selecting COMIDA2	results	# 4 of 9
For Julian Day 141,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 142,	selecting COMIDA2	results	# 4 of 9
For Julian Day 143,	selecting COMIDA2	results	# 4 of 9
For Julian Day 144,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 146,	selecting COMIDA2	results	# 4 of 9
For Julian Day 147,	selecting COMIDA2	results	# 4 of 9
For Julian Day 148,	selecting COMIDA2	results	# 4 of 9
For Julian Day 149,	selecting COMIDA2	results	# 4 of 9



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-202 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 05 224	TOT LIF 0-16.1 km	0.4955	9.69E-04	0.00E+00	2.93E-03	5.34E-03	1.20E-02	1.49E-02	2.18E-01	2.04E-
L-EDEWBODY 04 249	TOT LIF 0-80.5 km	1.0000	7.96E+00	4.28E+00	2.08E+01	2.60E+01	3.60E+01	4.02E+01	6.00E+01	1.52E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 249	0-80.5 km	1.0000	4.42E-08	2.32E-08	1.11E-07	1.36E-07	2.09E-07	2.34E-07	3.27E-07	1.52E-
CAN FAT/TOTAL 05 224	0-16.1 km	0.4955	7.47E-10	0.00E+00	2.21E-09	4.14E-09	1.00E-08	1.26E-08	1.66E-07	2.04E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 02 10	0-1.6 km	0.9050	1.30E-04	1.07E-04	2.67E-04	3.35E-04	NOT-FOUND	NOT-FOUND	5.39E-04	1.22E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	1.5-204 of 1.5-374

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
		Approved by		Date	

L-EDEWBODY 04 217	TOT LIF	0-16.1 km	1.0000	6.80E-01	3.31E-01	1.62E+00	2.34E+00	5.07E+00	6.31E+00	1.57E+01	1.79E-
L-EDEWBODY 04 249	TOT LIF	0-80.5 km	1.0000	8.64E+00	4.86E+00	2.17E+01	2.74E+01	3.75E+01	4.21E+01	6.03E+01	1.52E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0	0-80.5 km	1.0000	4.80E-08	2.74E-08	1.16E-07	1.44E-07	2.17E-07	2.40E-07	3.29E-07	1.52E-
CAN FAT/TOTAL	0	0-16.1 km	1.0000	5.12E-07	2.51E-07	1.23E-06	1.73E-06	3.73E-06	4.88E-06	1.17E-05	1.79E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 04 211		0-1.6 km	1.0000	7.15E-03	6.93E-03	1.05E-02	1.27E-02	2.00E-02	3.00E-02	3.05E-02	8.75E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.5-205 of 1.5-374		

Client PSEG Nuclear Development	X	Non-Safety Related	
Project PSEG ESPA			Prepared by
Proj. No 12380-001		Equip. No.	Date
			Reviewed by
			Date
			Approved by
			Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

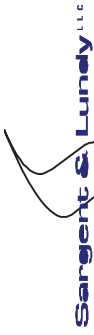
SOURCE TERM 1 OF 10:
NCL

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 18:01:03	PAGE 4	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	6.83E+00	4.17E+00	1.53E+01	2.05E+01	2.96E+01	3.39E+01	5.66E+01	4.85E-	
04 85											
CAN FAT/TOTAL	0-16.1 km	1.0000	6.27E-01	3.93E-01	1.38E+00	1.91E+00	3.65E+00	4.71E+00	1.11E+01	4.38E-	
04 175											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	1.39E+01	8.70E+00	3.15E+01	4.19E+01	8.31E+01	1.07E+02	2.52E+02	4.38E-	
04 175											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.53E+02	9.47E+01	3.58E+02	4.53E+02	6.67E+02	7.54E+02	1.28E+03	4.85E-	
04 85											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	7.45E-07	4.05E-07	1.86E-06	2.33E-06	3.42E-06	3.95E-06	6.70E-06	4.85E-	
04 85											
CAN FAT/TOTAL	0-16.1 km	1.0000	7.85E-06	3.77E-06	1.97E-05	2.71E-05	5.71E-05	7.40E-05	1.81E-04	4.38E-	
04 175											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-207 of 1.5-374

Client PSEG Nuclear Development	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
Project PSEG ESPA	Prepared by	
Proj. No 12380-001	Reviewed by	
Equip. No.	Approved by	
	Date	Date
	Date	Date

INGESTION OF POULTRY 05 163	1.0000 2.91E-01 2.02E-01 6.49E-01 8.10E-01 1.12E+00 1.23E+00 2.55E+00 1.28E-	
INGESTION OF OTHER MEAT CROPS 05 163	1.0000 4.57E-02 3.54E-02 9.45E-02 1.13E-01 1.59E-01 1.84E-01 3.72E-01 1.28E-	
L-EDEMBODY POP. DOSE (Sv) 0-80.5 km		
TOTAL LONG-TERM PATHWAYS DOSE 04 85	1.0000 1.53E+02 9.47E+01 3.58E+02 4.53E+02 6.67E+02 7.54E+02 1.28E+03 4.85E-	
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 85	1.0000 1.37E+02 7.44E+01 3.45E+02 4.34E+02 6.42E+02 7.35E+02 1.24E+03 4.85E-	
TOTAL INGESTION PATHWAYS DOSE 04 85	1.0000 1.57E+01 9.80E+00 3.66E+01 4.66E+01 6.28E+01 7.05E+01 1.07E+02 3.42E-	
LONG-TERM GROUNDSHINE DOSE 04 85	1.0000 1.37E+02 7.38E+01 3.44E+02 4.33E+02 6.42E+02 7.31E+02 1.23E+03 4.85E-	
LONG-TERM RESUSPENSION DOSE 04 85	1.0000 8.23E-01 4.47E-01 2.11E+00 2.63E+00 3.90E+00 4.56E+00 7.40E+00 4.85E-	
WATER INGESTION DOSE 04 175	1.0000 1.02E-01 7.11E-02 2.16E-01 2.90E-01 4.13E-01 4.78E-01 7.10E-01 1.52E-	



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-211 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 6

SOURCE TERM 1 OF 10:
NCL

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	PROB>=X	X	PROB>=X
1.00E-08	1.00E-11	1.00E-09	1.00E-08
2.00E-08	1.00E+00	2.00E-09	2.00E-08
3.00E-08	1.00E+00	3.00E-09	3.00E-08
5.00E-08	1.00E+00	5.00E-09	5.00E-08
7.00E-08	1.00E+00	7.00E-09	7.00E-08
1.00E-07	1.00E+00	1.00E-08	1.00E-07
2.00E-07	1.00E+00	2.00E-08	2.00E-07
3.00E-07	1.00E+00	3.00E-08	3.00E-07
5.00E-07	1.00E+00	5.00E-08	5.00E-07
7.00E-07	1.00E+00	7.00E-08	7.00E-07
1.00E-06	1.00E+00	1.00E-07	1.00E-06
2.00E-06	1.00E+00	2.00E-07	2.00E-06
3.00E-06	1.00E+00	3.00E-07	3.00E-06
5.00E-06	1.00E+00	5.00E-07	5.00E-06
7.00E-06	1.00E+00	7.00E-07	7.00E-06
1.00E-05	1.00E+00	1.00E-06	1.00E-05
2.00E-05	1.00E+00	2.00E-06	2.00E-05
3.00E-05	1.00E+00	3.00E-06	3.00E-05
5.00E-05	1.00E+00	5.00E-06	5.00E-05
7.00E-05	9.99E-01	7.00E-06	7.00E-05
1.00E-04	9.93E-01	1.00E-05	1.00E-04
2.00E-04	9.71E-01	2.00E-05	2.00E-04

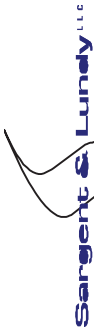


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-220 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 05 338	0-16.1 km	0.6018	5.78E-01	8.13E-03	1.64E+00	3.16E+00	8.13E+00	1.14E+01	5.44E+01	4.09E-
L-EDEWBODY TOT LIF 04 345	0-80.5 km	1.0000	8.35E+01	4.08E+01	2.16E+02	2.98E+02	5.12E+02	5.93E+02	1.42E+03	1.33E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 345	0-80.5 km	1.0000	4.25E-07	2.10E-07	1.09E-06	1.46E-06	2.52E-06	3.02E-06	7.17E-06	1.33E-
CAN FAT/TOTAL 05 338	0-16.1 km	0.6018	4.00E-07	5.74E-09	1.11E-06	2.13E-06	5.64E-06	7.87E-06	3.77E-05	4.09E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 03 251	0-1.6 km	0.9959	4.17E-02	3.79E-02	6.68E-02	7.36E-02	8.71E-02	9.36E-02	9.88E-02	2.97E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-222 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 294	TOT LIF 0-16.1 km	1.0000	5.79E+00	2.51E+00	1.38E+01	2.09E+01	5.15E+01	6.40E+01	2.03E+02	1.36E-
L-EDEWBODY 04 345	TOT LIF 0-80.5 km	1.0000	8.87E+01	4.61E+01	2.25E+02	3.08E+02	5.18E+02	6.10E+02	1.44E+03	1.33E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 345	0-80.5 km	1.0000	4.52E-07	2.33E-07	1.12E-06	1.51E-06	2.63E-06	3.12E-06	7.27E-06	1.33E-
CAN FAT/TOTAL 04 294	0-16.1 km	1.0000	3.99E-06	1.73E-06	9.70E-06	1.42E-05	3.36E-05	4.30E-05	1.39E-04	1.36E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 177	0-1.6 km	1.0000	8.08E-02	6.69E-02	1.33E-01	1.58E-01	2.22E-01	2.46E-01	3.38E-01	4.57E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page		1.5-223 of 1.5-374	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 2 OF 10:
 Case 1

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 18:01:03	PAGE 10	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	PEAK	PEAK
QUANTILES											
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	8.68E-02	6.55E-02	1.92E-01	2.37E-01	3.50E-01	4.04E-01	4.04E-01	1.30E+00	1.08E-
05 86											
CAN FAT/TOTAL	0-16.1 km	1.0000	1.65E-02	1.00E-02	4.09E-02	5.57E-02	8.71E-02	1.02E-01	1.02E-01	2.00E-01	2.26E-
05 195											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	2.87E-01	1.71E-01	7.08E-01	9.67E-01	1.49E+00	1.79E+00	1.79E+00	4.50E+00	2.26E-
05 195											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.76E+00	1.20E+00	3.92E+00	5.06E+00	7.15E+00	8.43E+00	8.43E+00	2.92E+01	1.08E-
05 86											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	7.41E-09	4.03E-09	1.84E-08	2.33E-08	3.56E-08	4.24E-08	4.24E-08	1.54E-07	1.08E-
05 86											
CAN FAT/TOTAL	0-16.1 km	1.0000	8.99E-08	3.79E-08	2.18E-07	3.23E-07	7.70E-07	9.86E-07	9.86E-07	3.20E-06	2.26E-
05 195											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



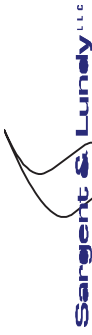
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page		1.5-225 of 1.5-374	

Client	PSEG Nuclear Development				
Project	PSEG ESPA		Safety Related	Non-Safety Related	
Proj. No	12380-001	Equip. No.			
			Prepared by	Date	
			Reviewed by	Date	
			Approved by	Date	

INGESTION OF POULTRY 05 176	1.0000	6.92E-03	2.27E-03	1.81E-02	2.70E-02	5.91E-02	8.03E-02	1.58E-01	2.85E-
INGESTION OF OTHER MEAT CROPS 05 176	1.0000	1.00E-02	6.97E-03	2.09E-02	2.89E-02	5.98E-02	8.24E-02	1.64E-01	2.85E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 86	1.0000	1.76E+00	1.20E+00	3.92E+00	5.06E+00	7.15E+00	8.43E+00	2.92E+01	1.08E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 86	1.0000	1.37E+00	7.46E-01	3.41E+00	4.25E+00	6.49E+00	7.65E+00	2.84E+01	1.08E-
TOTAL INGESTION PATHWAYS DOSE 05 162	1.0000	3.89E-01	1.65E-01	1.02E+00	1.15E+00	1.52E+00	1.71E+00	2.83E+00	1.83E-
LONG-TERM GROUNDSHINE DOSE 05 86	1.0000	1.35E+00	7.33E-01	3.36E+00	4.15E+00	6.40E+00	7.55E+00	2.80E+01	1.08E-
LONG-TERM RESUSPENSION DOSE 05 86	1.0000	1.97E-02	1.07E-02	5.05E-02	6.20E-02	9.31E-02	1.09E-01	4.08E-01	1.08E-
WATER INGESTION DOSE 06 86	1.0000	6.58E-04	4.25E-04	1.40E-03	1.97E-03	2.97E-03	3.38E-03	9.24E-03	7.64E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page		1.5-227 of 1.5-374

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related	Prepared by	Date
POP. -DEPENDENT DECONTAMINATION COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
FARM-DEPENDENT DECONTAMINATION COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
POP. -DEPENDENT INTERDICTION COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
FARM-DEPENDENT INTERDICTION COST	0.4703		1.02E+04	3.47E+04	4.11E+04
04 80					1.15E+05
POP. -DEPENDENT CONDEMNATION COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
FARM-DEPENDENT CONDEMNATION COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
EMERGENCY PHASE COST	0.6697		7.11E+05	5.32E+03	1.19E+06
04 175					2.57E+06
INTERMEDIATE PHASE COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
MILK DISPOSAL COST	0.0034		1.03E+00	0.00E+00	0.00E+00
04 28					0.00E+00
CROP DISPOSAL COST	0.4703		9.47E+03	0.00E+00	3.45E+04
04 80					4.08E+04
AFFECTED AREA/POPULATION			0-80.5 km		
FARM DECONTAMINATION (HECTARES)	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
POP. DECONTAMINATION (INDIVIDUALS)	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
FARM INTERDICTION (HECTARES)	0.4703		5.61E+00	0.00E+00	2.24E+01
04 80					2.57E+01
POP. INTERDICTION (INDIVIDUALS)	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
FARM CONDEMNATION (HECTARES)	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
POP. CONDEMNATION (INDIVIDUALS)	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
		Page	1.5-228 of 1.5-374

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

MILK DISPOSAL AREA (HECTARES)	0.0034	2.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E+01	6.59E-
04 28								
CROP DISPOSAL AREA (HECTARES)	0.4703	5.61E+00	0.00E+00	2.24E+01	2.57E+01	7.52E+01	8.26E+01	2.05E+02
04 80								



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-229 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

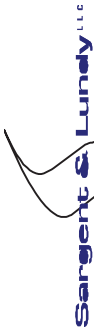
MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 12

SOURCE TERM 2 OF 10:
Case 1

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-08	1.00E-08	1.00E-07	1.00E-09
2.00E-08	2.00E-08	2.00E-07	2.00E-09
3.00E-08	3.00E-08	3.00E-07	3.00E-09
5.00E-08	5.00E-08	5.00E-07	5.00E-09
7.00E-08	7.00E-08	7.00E-07	7.00E-09
1.00E-07	1.00E-07	1.00E-06	1.00E-08
2.00E-07	2.00E-07	2.00E-06	2.00E-08
3.00E-07	3.00E-07	3.00E-06	3.00E-08
5.00E-07	5.00E-07	5.00E-06	5.00E-08
7.00E-07	7.00E-07	7.00E-06	7.00E-08
1.00E-06	1.00E-06	1.00E-05	1.00E-07
2.00E-06	2.00E-06	2.00E-05	2.00E-07
3.00E-06	3.00E-06	3.00E-05	3.00E-07
5.00E-06	5.00E-06	5.00E-05	5.00E-07
7.00E-06	7.00E-06	7.00E-05	7.00E-07
1.00E-05	1.00E-05	1.00E-04	1.00E-06
2.00E-05	2.00E-05	2.00E-04	2.00E-06
3.00E-05	3.00E-05	3.00E-04	3.00E-06
5.00E-05	5.00E-05	5.00E-04	5.00E-06
7.00E-05	7.00E-05	7.00E-04	7.00E-06
1.00E-04	1.00E-04	1.00E-03	1.00E-05
2.00E-04	2.00E-04	2.00E-03	2.00E-05



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-238 of 1.5-374

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

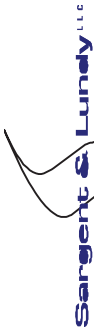
L-EDEWBODY 05 338	TOT LIF	0-16.1 km	0.6018	6.02E-01	8.44E-03	1.68E+00	3.22E+00	8.44E+00	1.17E+01	5.67E+01	4.09E-
L-EDEWBODY 04 345	TOT LIF	0-80.5 km	1.0000	8.50E+01	4.16E+01	2.19E+02	3.00E+02	5.16E+02	6.00E+02	1.45E+03	1.33E-

POPULATION WEIGHTED RISK

ERL FAT/TOTAL 0.00E+00	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 345		0-80.5 km	1.0000	4.34E-07	2.16E-07	1.10E-06	1.49E-06	2.58E-06	3.07E-06	7.32E-06	1.33E-
CAN FAT/TOTAL 05 338		0-16.1 km	0.6018	4.19E-07	5.88E-09	1.14E-06	2.20E-06	5.92E-06	8.01E-06	3.96E-05	4.09E-

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 03 251		0-1.6 km	0.9959	4.35E-02	4.07E-02	7.22E-02	7.93E-02	9.84E-02	1.01E-01	1.03E-01	2.97E-
----------------------	--	----------	--------	----------	----------	----------	----------	----------	----------	----------	--------



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-240 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 04 294	0-16.1 km	1.0000	5.96E+00	2.59E+00	1.41E+01	2.12E+01	5.30E+01	7.03E+01	2.09E+02	1.36E-
L-EDEWBODY TOT LIF 04 345	0-80.5 km	1.0000	9.03E+01	4.70E+01	2.28E+02	3.14E+02	5.25E+02	6.23E+02	1.47E+03	1.33E-

POPULATION WEIGHTED RISK

ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 04 345	0-80.5 km	1.0000	4.62E-07	2.38E-07	1.13E-06	1.53E-06	2.64E-06	3.13E-06	7.43E-06	1.33E-
CAN FAT/TOTAL 04 294	0-16.1 km	1.0000	4.13E-06	1.80E-06	1.01E-05	1.46E-05	3.50E-05	4.66E-05	1.44E-04	1.36E-

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 04 177	0-1.6 km	1.0000	8.41E-02	7.08E-02	1.46E-01	1.81E-01	2.34E-01	2.55E-01	3.53E-01	4.57E-
----------------------	----------	--------	----------	----------	----------	----------	----------	----------	----------	--------



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.5-241 of 1.5-374		

Client	PSEG Nuclear Development	Prepared by	
Project	PSEG ESPA	Reviewed by	
Proj. No	12380-001	Approved by	
	Equip. No.	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

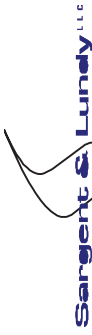
SOURCE TERM 3 OF 10:
Case 2

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 18:01:03	PAGE 16	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CON	PEAK	PEAK
QUANTILES												
TRIAL												
HEALTH EFFECTS CASES												
CAN FAT/TOTAL	0-80.5 km	1.0000	1.47E+00	9.41E-01	3.38E+00	4.18E+00	6.38E+00	7.47E+00	7.47E+00	2.67E+01	1.08E-	1.08E-
05 86												
CAN FAT/TOTAL	0-16.1 km	1.0000	1.74E-01	1.08E-01	3.91E-01	5.39E-01	1.06E+00	1.34E+00	1.34E+00	4.14E+00	2.26E-	2.26E-
05 195												
POPULATION DOSE (Sv)												
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	3.80E+00	2.35E+00	8.64E+00	1.19E+01	2.38E+01	3.04E+01	3.04E+01	9.38E+01	2.26E-	2.26E-
05 195												
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	3.28E+01	2.09E+01	7.82E+01	9.97E+01	1.45E+02	1.70E+02	1.70E+02	6.05E+02	1.08E-	1.08E-
05 86												
POPULATION WEIGHTED RISK												
CAN FAT/TOTAL	0-80.5 km	1.0000	1.57E-07	8.51E-08	3.83E-07	5.02E-07	7.40E-07	8.69E-07	8.69E-07	3.23E-06	1.08E-	1.08E-
05 86												
CAN FAT/TOTAL	0-16.1 km	1.0000	1.89E-06	8.13E-07	4.57E-06	6.74E-06	1.52E-05	2.04E-05	2.04E-05	6.75E-05	2.26E-	2.26E-
05 195												

PEAK DOSE FOUND ON SPATIAL GRID (Sv)



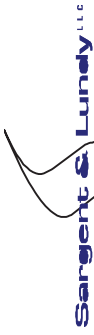
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.5-242 of 1.5-374	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 205	0-1.6 km	0.9990	2.97E-02	2.56E-02	5.03E-02	5.19E-02	5.59E-02	5.77E-02	6.59E-02	2.76E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 195	0-16.1 km	1.0000	3.80E+00	2.35E+00	8.64E+00	1.19E+01	2.38E+01	3.04E+01	9.38E+01	2.26E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 195		1.0000	2.60E+00	1.12E+00	6.33E+00	9.25E+00	2.20E+01	2.74E+01	9.32E+01	2.26E-
TOTAL INGESTION PATHWAYS DOSE 05 332		1.0000	1.20E+00	6.38E-01	3.06E+00	3.64E+00	5.18E+00	5.58E+00	8.81E+00	2.06E-
LONG-TERM GROUNDSHINE DOSE 05 195		1.0000	2.59E+00	1.11E+00	6.28E+00	9.18E+00	2.17E+01	2.66E+01	9.26E+01	2.26E-
LONG-TERM RESUSPENSION DOSE 05 195		1.0000	1.56E-02	6.86E-03	3.78E-02	5.59E-02	1.26E-01	1.60E-01	5.58E-01	2.26E-
WATER INGESTION DOSE 05 195		0.8986	8.73E-03	5.56E-03	2.06E-02	3.05E-02	5.53E-02	6.82E-02	2.21E-01	2.06E-
POP.-DEPENDENT DECONTAMINATION DOSE 0.00E+00		0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
FARM-DEPENDENT DECONTAMINATION DOSE 05 132		0.0326	2.97E-06	0.00E+00	0.00E+00	0.00E+00	2.01E-04	2.37E-04	6.49E-04	5.41E-
INGESTION OF GRAINS 05 332		1.0000	4.88E-02	2.86E-03	1.33E-01	1.73E-01	2.51E-01	2.85E-01	4.53E-01	2.06E-
INGESTION OF LEAF VEG 04 156		1.0000	6.89E-02	4.19E-03	1.99E-01	2.53E-01	4.16E-01	5.07E-01	8.45E-01	1.24E-
INGESTION OF ROOT CROPS 05 332		1.0000	6.44E-02	3.82E-03	1.90E-01	2.34E-01	3.28E-01	3.61E-01	6.15E-01	2.06E-
INGESTION OF FRUITS 05 332		1.0000	9.61E-02	8.70E-03	2.77E-01	3.43E-01	5.10E-01	5.65E-01	9.07E-01	2.06E-
INGESTION OF LEGUMES 05 332		1.0000	5.51E-02	4.09E-03	1.51E-01	2.04E-01	2.94E-01	3.19E-01	5.22E-01	2.06E-
INGESTION OF BEEF 05 29		1.0000	3.65E-01	2.30E-01	8.49E-01	1.03E+00	1.31E+00	1.46E+00	2.73E+00	4.92E-
INGESTION OF MILK 06 377		1.0000	3.52E-01	1.92E-01	9.01E-01	1.10E+00	1.54E+00	1.78E+00	3.12E+00	5.90E-



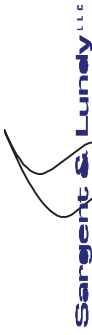
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page 1.5-243 of 1.5-374		

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
		Approved by		Date	

INGESTION OF POULTRY 04 156	1.0000	1.19E-01	5.86E-02	3.01E-01	3.72E-01	5.99E-01	7.19E-01	1.23E+00	1.24E-
INGESTION OF OTHER MEAT CROPS 04 156	1.0000	1.85E-02	1.12E-02	4.39E-02	5.63E-02	8.72E-02	1.03E-01	1.82E-01	1.24E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 86	1.0000	3.28E+01	2.09E+01	7.82E+01	9.97E+01	1.45E+02	1.70E+02	6.05E+02	1.08E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 86	1.0000	2.89E+01	1.56E+01	7.35E+01	9.16E+01	1.38E+02	1.63E+02	5.96E+02	1.08E-
TOTAL INGESTION PATHWAYS DOSE 05 162	1.0000	3.90E+00	2.00E+00	9.62E+00	1.15E+01	1.69E+01	2.00E+01	3.67E+01	1.83E-
LONG-TERM GROUNDSHINE DOSE 05 86	1.0000	2.87E+01	1.55E+01	7.32E+01	9.10E+01	1.37E+02	1.61E+02	5.93E+02	1.08E-
LONG-TERM RESUSPENSION DOSE 05 86	1.0000	1.73E-01	9.39E-02	4.29E-01	5.50E-01	8.20E-01	9.61E-01	3.57E+00	1.08E-
WATER INGESTION DOSE 06 86	1.0000	2.19E-02	1.39E-02	4.91E-02	6.54E-02	9.89E-02	1.14E-01	3.08E-01	7.64E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page		1.5-245 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related		
POP.-DEPENDENT DECONTAMINATION COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
FARM-DEPENDENT DECONTAMINATION COST	0.0326		2.71E+02	0.00E+00	2.02E+04 NOT-FOUND
03 1					2.54E+04 6.60E-
POP.-DEPENDENT INTERDICTION COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
FARM-DEPENDENT INTERDICTION COST	0.7660		2.32E+05	9.97E+03	5.85E+05 2.73E+06
06 27					3.06E+06 4.43E+06 5.90E-
POP.-DEPENDENT CONDEMNATION COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
FARM-DEPENDENT CONDEMNATION COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
EMERGENCY PHASE COST	0.6789		7.30E+05	5.88E+03	1.24E+06 2.63E+06
04 175					1.04E+07 2.23E+07 6.97E+07 9.25E-
INTERMEDIATE PHASE COST	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
MILK DISPOSAL COST	0.6295		7.77E+02	8.24E+00	3.15E+03 4.23E+03
04 2					8.23E+03 9.16E+03 2.39E+04 1.94E-
CROP DISPOSAL COST	0.7660		1.81E+05	7.51E+03	5.65E+05 8.58E+05
05 44					1.89E+06 3.16E+06 4.91E+06 3.89E-
AFFECTED AREA/POPULATION					0-80.5 km
FARM DECONTAMINATION (HECTARES)	0.0326		2.44E-01	0.00E+00	0.00E+00
03 1					2.01E+01 NOT-FOUND
POP. DECONTAMINATION (INDIVIDUALS)	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
FARM INTERDICTION (HECTARES)	0.7660		1.23E+02	4.47E+00	3.61E+02 5.84E+02
05 44					1.57E+03 2.01E+03 2.30E+03 9.00E-
POP. INTERDICTION (INDIVIDUALS)	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
FARM CONDEMNATION (HECTARES)	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00
POP. CONDEMNATION (INDIVIDUALS)	0.0000		0.00E+00	0.00E+00	0.00E+00
0.00E+00					0.00E+00



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
		Page	1.5-246 of 1.5-374

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

MILK DISPOSAL AREA (HECTARES)	0.6295	1.97E+01	2.41E-01	7.38E+01	9.31E+01	2.29E+02	2.64E+02	5.70E+02	1.94E-04
CROP DISPOSAL AREA (HECTARES)	0.7660	1.23E+02	4.47E+00	3.61E+02	5.84E+02	1.57E+03	2.01E+03	2.30E+03	9.00E-05



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-247 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 18

SOURCE TERM 3 OF 10:
Case 2

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
1.00E-08	1.00E-08	1.00E-07	1.00E-08
2.00E-08	2.00E-08	2.00E-07	2.00E-08
3.00E-08	3.00E-08	3.00E-07	3.00E-08
5.00E-08	5.00E-08	5.00E-07	5.00E-08
7.00E-08	7.00E-08	7.00E-07	7.00E-08
1.00E-07	1.00E-07	1.00E-06	1.00E-07
2.00E-07	2.00E-07	2.00E-06	2.00E-07
3.00E-07	3.00E-07	3.00E-06	3.00E-07
5.00E-07	5.00E-07	5.00E-06	5.00E-07
7.00E-07	7.00E-07	7.00E-06	7.00E-07
1.00E-06	1.00E-06	1.00E-05	1.00E-06
2.00E-06	2.00E-06	2.00E-05	2.00E-06
3.00E-06	3.00E-06	3.00E-05	3.00E-06
5.00E-06	5.00E-06	5.00E-05	5.00E-06
7.00E-06	7.00E-06	7.00E-05	7.00E-06
1.00E-05	1.00E-05	1.00E-04	1.00E-05
2.00E-05	2.00E-05	2.00E-04	2.00E-05
3.00E-05	3.00E-05	3.00E-04	3.00E-05
5.00E-05	5.00E-05	5.00E-04	5.00E-05
7.00E-05	7.00E-05	7.00E-04	7.00E-05
1.00E-04	1.00E-04	1.00E-03	1.00E-04
2.00E-04	2.00E-04	2.00E-03	2.00E-04
9.96E-01	9.96E-01	9.96E-01	9.96E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related		
Client PSEG Nuclear Development		Prepared by		
Project PSEG ESPA		Reviewed by		
Proj. No 12380-001		Approved by		
Equip. No.		Date		

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 4 OF 10:
 Case 3

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION

10-JAN-10 18:01:03	PAGE 20	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.16E+01	6.14E+00	3.06E+01	3.66E+01	5.33E+01	5.95E+01	8.65E+01	4.85E-
04 85	0-16.1 km	0.5919	1.64E-03	1.71E-05	4.40E-03	8.89E-03	2.30E-02	3.05E-02	2.57E-01	2.04E-
05 224	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										
EARLY dose L-EDEWBODY > 0.250 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										

POPULATION DOSE (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-258 of 1.5-374

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 217	TOT LIF 0-16.1 km	1.0000	1.27E+01	7.26E+00	3.14E+01	4.15E+01	8.39E+01	1.04E+02	1.61E+02	1.79E-
L-EDEWBODY 04 85	TOT LIF 0-80.5 km	1.0000	2.69E+02	1.43E+02	7.04E+02	8.60E+02	1.20E+03	1.35E+03	1.99E+03	4.85E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0-80.5 km	1.0000	1.50E-06	8.21E-07	3.73E-06	4.82E-06	6.78E-06	7.48E-06	1.08E-05	4.85E-
CAN FAT/TOTAL	0-16.1 km	1.0000	9.61E-06	5.51E-06	2.36E-05	3.25E-05	6.51E-05	7.87E-05	1.25E-04	4.38E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 211	0-1.6 km	1.0000	8.48E-02	7.61E-02	1.31E-01	1.52E-01	2.09E-01	2.28E-01	2.87E-01	8.75E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.5-259 of 1.5-374		

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

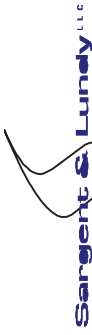
SOURCE TERM 4 OF 10:
Case 3

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 18:01:03	PAGE 22	PROB	QUANTILES					PEAK	PEAK	
PEAK	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB	
TRIAL										
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	7.85E+01	4.49E+01	1.96E+02	2.39E+02	3.49E+02	4.00E+02	6.92E+02	4.85E-
04 85										
CAN FAT/TOTAL	0-16.1 km	1.0000	4.96E+00	2.81E+00	1.18E+01	1.63E+01	3.16E+01	3.76E+01	5.99E+01	1.56E-
05 184										
POPULATION DOSE (Sv)										
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	1.12E+02	6.25E+01	2.74E+02	3.72E+02	7.36E+02	9.34E+02	1.36E+03	1.56E-
05 184										
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.77E+03	1.00E+03	4.35E+03	5.53E+03	8.22E+03	9.69E+03	1.57E+04	4.85E-
04 85										
POPULATION WEIGHTED RISK										
CAN FAT/TOTAL	0-80.5 km	1.0000	9.19E-06	4.96E-06	2.32E-05	2.97E-05	4.29E-05	5.02E-05	8.41E-05	4.85E-
04 85										
CAN FAT/TOTAL	0-16.1 km	1.0000	7.69E-05	3.99E-05	1.90E-04	2.67E-04	5.26E-04	6.67E-04	9.78E-04	1.56E-
05 184										

PEAK DOSE FOUND ON SPATIAL GRID (Sv)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.5-260 of 1.5-374	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 25	0-1.6 km	1.0000	6.11E-02	6.35E-02	7.48E-02	7.73E-02	8.34E-02	8.62E-02	9.99E-02	2.19E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 184	0-16.1 km	1.0000	1.12E+02	6.25E+01	2.74E+02	3.72E+02	7.36E+02	9.34E+02	1.36E+03	1.56E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 184		1.0000	1.06E+02	5.59E+01	2.67E+02	3.66E+02	7.29E+02	9.24E+02	1.35E+03	1.56E-
TOTAL INGESTION PATHWAYS DOSE 04 59		1.0000	5.22E+00	4.51E+00	9.38E+00	1.11E+01	1.55E+01	1.80E+01	2.28E+01	4.19E-
LONG-TERM GROUNDSHINE DOSE 05 184		1.0000	1.05E+02	5.58E+01	2.64E+02	3.62E+02	7.23E+02	9.21E+02	1.34E+03	1.56E-
LONG-TERM RESUSPENSION DOSE 05 184		1.0000	7.28E-01	3.75E-01	1.82E+00	2.50E+00	5.04E+00	6.45E+00	9.43E+00	1.56E-
WATER INGESTION DOSE 04 175		0.9945	4.60E-01	3.11E-01	1.04E+00	1.45E+00	2.60E+00	3.11E+00	7.26E+00	1.52E-
POP.-DEPENDENT DECONTAMINATION DOSE 04 175		0.6537	3.80E-01	1.44E-02	5.77E-01	1.78E+00	6.04E+00	9.40E+00	2.88E+01	4.38E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 54		0.9634	4.41E-02	1.27E-02	1.28E-01	1.94E-01	2.82E-01	3.17E-01	5.25E-01	1.07E-
INGESTION OF GRAINS 04 59		1.0000	1.70E-01	3.91E-02	4.74E-01	5.78E-01	8.88E-01	1.07E+00	1.68E+00	7.52E-
INGESTION OF LEAF VEG 05 160		1.0000	2.45E-01	1.08E-01	6.23E-01	8.00E-01	1.11E+00	1.20E+00	2.31E+00	1.33E-
INGESTION OF ROOT CROPS 04 59		1.0000	2.29E-01	6.52E-02	6.23E-01	7.74E-01	1.21E+00	1.52E+00	2.20E+00	7.52E-
INGESTION OF FRUITS 04 59		1.0000	3.96E-01	2.26E-01	1.00E+00	1.20E+00	1.85E+00	2.28E+00	3.34E+00	7.52E-
INGESTION OF LEGUMES 04 59		1.0000	2.14E-01	1.04E-01	5.44E-01	6.73E-01	1.05E+00	1.23E+00	1.90E+00	7.52E-
INGESTION OF BEEF 04 329		1.0000	1.05E+00	6.97E-01	2.43E+00	3.12E+00	4.17E+00	4.73E+00	7.58E+00	2.09E-
INGESTION OF MILK 06 27		1.0000	1.90E+00	1.57E+00	3.63E+00	4.44E+00	5.96E+00	6.59E+00	8.97E+00	5.90E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No.	2009-11222	
Rev.	2	Date
Page	1.5-265 of 1.5-374	

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
		Approved by		Date	

MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 24

SOURCE TERM 4 OF 10:
Case 3

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
1.00E-08	1.00E-09	1.00E-08	1.00E-08
2.00E-08	2.00E-09	2.00E-08	2.00E-08
3.00E-08	3.00E-09	3.00E-08	3.00E-08
5.00E-08	5.00E-09	5.00E-08	5.00E-08
7.00E-08	7.00E-09	7.00E-08	7.00E-08
1.00E-07	1.00E-08	1.00E-07	1.00E-07
2.00E-07	2.00E-08	2.00E-07	2.00E-07
3.00E-07	3.00E-08	3.00E-07	3.00E-07
5.00E-07	5.00E-08	5.00E-07	5.00E-07
7.00E-07	7.00E-08	7.00E-07	7.00E-07
1.00E-06	1.00E-07	1.00E-06	1.00E-06
2.00E-06	2.00E-07	2.00E-06	2.00E-06
3.00E-06	3.00E-07	3.00E-06	3.00E-06
5.00E-06	5.00E-07	5.00E-06	5.00E-06
7.00E-06	7.00E-07	7.00E-06	7.00E-06
1.00E-05	1.00E-06	1.00E-05	1.00E-05
2.00E-05	2.00E-06	2.00E-05	2.00E-05
3.00E-05	3.00E-06	3.00E-05	3.00E-05
5.00E-05	5.00E-06	5.00E-05	5.00E-05
7.00E-05	7.00E-06	7.00E-05	7.00E-05
1.00E-04	1.00E-05	1.00E-04	1.00E-04
2.00E-04	2.00E-05	2.00E-04	2.00E-04
3.00E-04	3.00E-05	3.00E-04	3.00E-04
5.00E-04	5.00E-05	5.00E-04	5.00E-04
7.00E-04	7.00E-05	7.00E-04	7.00E-04
1.00E-03	1.00E-04	1.00E-03	1.00E-03
2.00E-03	2.00E-04	2.00E-03	2.00E-03
3.00E-03	3.00E-04	3.00E-03	3.00E-03
5.00E-03	5.00E-04	5.00E-03	5.00E-03
7.00E-03	7.00E-04	7.00E-03	7.00E-03
1.00E-02	1.00E-03	1.00E-02	1.00E-02
2.00E-02	2.00E-03	2.00E-02	2.00E-02
3.00E-02	3.00E-03	3.00E-02	3.00E-02
5.00E-02	5.00E-03	5.00E-02	5.00E-02
7.00E-02	7.00E-03	7.00E-02	7.00E-02
1.00E-01	1.00E-02	1.00E-01	1.00E-01
2.00E-01	2.00E-02	2.00E-01	2.00E-01
3.00E-01	3.00E-02	3.00E-01	3.00E-01
5.00E-01	5.00E-02	5.00E-01	5.00E-01
7.00E-01	7.00E-02	7.00E-01	7.00E-01
1.00E+00	1.00E-01	1.00E+00	1.00E+00
2.00E+00	2.00E-01	2.00E+00	2.00E+00
3.00E+00	3.00E-01	3.00E+00	3.00E+00
5.00E+00	5.00E-01	5.00E+00	5.00E+00
7.00E+00	7.00E-01	7.00E+00	7.00E+00
1.00E+01	1.00E+00	1.00E+01	1.00E+01
2.00E+01	2.00E+00	2.00E+01	2.00E+01
3.00E+01	3.00E+00	3.00E+01	3.00E+01
5.00E+01	5.00E+00	5.00E+01	5.00E+01
7.00E+01	7.00E+00	7.00E+01	7.00E+01
1.00E+02	1.00E+01	1.00E+02	1.00E+02
2.00E+02	2.00E+01	2.00E+02	2.00E+02
3.00E+02	3.00E+01	3.00E+02	3.00E+02
5.00E+02	5.00E+01	5.00E+02	5.00E+02
7.00E+02	7.00E+01	7.00E+02	7.00E+02
1.00E+03	1.00E+02	1.00E+03	1.00E+03
2.00E+03	2.00E+02	2.00E+03	2.00E+03
3.00E+03	3.00E+02	3.00E+03	3.00E+03
5.00E+03	5.00E+02	5.00E+03	5.00E+03
7.00E+03	7.00E+02	7.00E+03	7.00E+03
1.00E+04	1.00E+03	1.00E+04	1.00E+04
2.00E+04	2.00E+03	2.00E+04	2.00E+04
3.00E+04	3.00E+03	3.00E+04	3.00E+04
5.00E+04	5.00E+03	5.00E+04	5.00E+04
7.00E+04	7.00E+03	7.00E+04	7.00E+04
1.00E+05	1.00E+04	1.00E+05	1.00E+05
2.00E+05	2.00E+04	2.00E+05	2.00E+05
3.00E+05	3.00E+04	3.00E+05	3.00E+05
5.00E+05	5.00E+04	5.00E+05	5.00E+05
7.00E+05	7.00E+04	7.00E+05	7.00E+05
1.00E+06	1.00E+05	1.00E+06	1.00E+06
2.00E+06	2.00E+05	2.00E+06	2.00E+06
3.00E+06	3.00E+05	3.00E+06	3.00E+06
5.00E+06	5.00E+05	5.00E+06	5.00E+06
7.00E+06	7.00E+05	7.00E+06	7.00E+06
1.00E+07	1.00E+06	1.00E+07	1.00E+07
2.00E+07	2.00E+06	2.00E+07	2.00E+07
3.00E+07	3.00E+06	3.00E+07	3.00E+07
5.00E+07	5.00E+06	5.00E+07	5.00E+07
7.00E+07	7.00E+06	7.00E+07	7.00E+07
1.00E+08	1.00E+07	1.00E+08	1.00E+08
2.00E+08	2.00E+07	2.00E+08	2.00E+08
3.00E+08	3.00E+07	3.00E+08	3.00E+08
5.00E+08	5.00E+07	5.00E+08	5.00E+08
7.00E+08	7.00E+07	7.00E+08	7.00E+08
1.00E+09	1.00E+08	1.00E+09	1.00E+09
2.00E+09	2.00E+08	2.00E+09	2.00E+09
3.00E+09	3.00E+08	3.00E+09	3.00E+09
5.00E+09	5.00E+08	5.00E+09	5.00E+09
7.00E+09	7.00E+08	7.00E+09	7.00E+09
1.00E+10	1.00E+09	1.00E+10	1.00E+10
2.00E+10	2.00E+09	2.00E+10	2.00E+10
3.00E+10	3.00E+09	3.00E+10	3.00E+10
5.00E+10	5.00E+09	5.00E+10	5.00E+10
7.00E+10	7.00E+09	7.00E+10	7.00E+10
1.00E+11	1.00E+10	1.00E+11	1.00E+11
2.00E+11	2.00E+10	2.00E+11	2.00E+11
3.00E+11	3.00E+10	3.00E+11	3.00E+11
5.00E+11	5.00E+10	5.00E+11	5.00E+11
7.00E+11	7.00E+10	7.00E+11	7.00E+11
1.00E+12	1.00E+11	1.00E+12	1.00E+12
2.00E+12	2.00E+11	2.00E+12	2.00E+12
3.00E+12	3.00E+11	3.00E+12	3.00E+12
5.00E+12	5.00E+11	5.00E+12	5.00E+12
7.00E+12	7.00E+11	7.00E+12	7.00E+12
1.00E+13	1.00E+12	1.00E+13	1.00E+13
2.00E+13	2.00E+12	2.00E+13	2.00E+13
3.00E+13	3.00E+12	3.00E+13	3.00E+13
5.00E+13	5.00E+12	5.00E+13	5.00E+13
7.00E+13	7.00E+12	7.00E+13	7.00E+13
1.00E+14	1.00E+13	1.00E+14	1.00E+14
2.00E+14	2.00E+13	2.00E+14	2.00E+14
3.00E+14	3.00E+13	3.00E+14	3.00E+14
5.00E+14	5.00E+13	5.00E+14	5.00E+14
7.00E+14	7.00E+13	7.00E+14	7.00E+14
1.00E+15	1.00E+14	1.00E+15	1.00E+15
2.00E+15	2.00E+14	2.00E+15	2.00E+15
3.00E+15	3.00E+14	3.00E+15	3.00E+15
5.00E+15	5.00E+14	5.00E+15	5.00E+15
7.00E+15	7.00E+14	7.00E+15	7.00E+15
1.00E+16	1.00E+15	1.00E+16	1.00E+16
2.00E+16	2.00E+15	2.00E+16	2.00E+16
3.00E+16	3.00E+15	3.00E+16	3.00E+16
5.00E+16	5.00E+15	5.00E+16	5.00E+16
7.00E+16	7.00E+15	7.00E+16	7.00E+16
1.00E+17	1.00E+16	1.00E+17	1.00E+17
2.00E+17	2.00E+16	2.00E+17	2.00E+17
3.00E+17	3.00E+16	3.00E+17	3.00E+17
5.00E+17	5.00E+16	5.00E+17	5.00E+17
7.00E+17	7.00E+16	7.00E+17	7.00E+17
1.00E+18	1.00E+17	1.00E+18	1.00E+18
2.00E+18	2.00E+17	2.00E+18	2.00E+18
3.00E+18	3.00E+17	3.00E+18	3.00E+18
5.00E+18	5.00E+17	5.00E+18	5.00E+18
7.00E+18	7.00E+17	7.00E+18	7.00E+18
1.00E+19	1.00E+18	1.00E+19	1.00E+19
2.00E+19	2.00E+18	2.00E+19	2.00E+19
3.00E+19	3.00E+18	3.00E+19	3.00E+19
5.00E+19	5.00E+18	5.00E+19	5.00E+19
7.00E+19	7.00E+18	7.00E+19	7.00E+19
1.00E+20	1.00E+19	1.00E+20	1.00E+20
2.00E+20	2.00E+19	2.00E+20	2.00E+20
3.00E+20	3.00E+19	3.00E+20	3.00E+20
5.00E+20	5.00E+19	5.00E+20	5.00E+20
7.00E+20	7.00E+19	7.00E+20	7.00E+20



Calcs. For ENVIRONMENTAL CONSEQUENCE		2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 5 OF 10:
 Case 4

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION

10-JAN-10 18:01:03	PAGE 26	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.45E+01	7.64E+00	3.69E+01	4.97E+01	7.20E+01	8.25E+01	2.44E+02	1.08E-
05 86	0-16.1 km	0.6018	4.72E-02	6.29E-04	1.29E-01	2.54E-01	6.53E-01	1.03E+00	4.45E+00	4.09E-
05 338	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										
EARLY dose L-EDEWBODY > 0.250 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										

POPULATION DOSE (Sv)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.5-277 of 1.5-374		

Client	PSEG Nuclear Development	Prepared by	
Project	PSEG ESPA	Reviewed by	
Proj. No	12380-001	Approved by	
	Equip. No.	Date	
		Date	
		Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

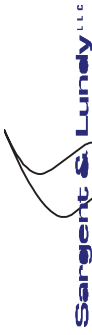
SOURCE TERM 5 OF 10:
Case 4

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 18:01:03	PAGE 28	PROB	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	PEAK	PEAK
QUANTILES											
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	3.09E+02	1.66E+02	7.88E+02	1.03E+03	1.52E+03	1.80E+03	1.80E+03	4.80E+03	1.08E-
05 86											
CAN FAT/TOTAL	0-16.1 km	1.0000	4.95E+00	2.82E+00	1.17E+01	1.68E+01	2.97E+01	4.34E+01	4.34E+01	7.54E+01	2.26E-
05 195											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	1.12E+02	6.27E+01	2.85E+02	3.96E+02	6.92E+02	9.84E+02	9.84E+02	1.71E+03	2.26E-
05 195											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	7.00E+03	3.74E+03	1.76E+04	2.32E+04	3.59E+04	4.23E+04	4.23E+04	1.09E+05	1.08E-
05 86											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	3.74E-05	2.04E-05	1.00E-04	1.23E-04	1.95E-04	2.26E-04	2.26E-04	5.85E-04	1.08E-
05 86											
CAN FAT/TOTAL	0-16.1 km	1.0000	7.19E-05	3.60E-05	1.94E-04	2.61E-04	4.82E-04	6.76E-04	6.76E-04	1.10E-03	5.74E-
06 204											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.5-279 of 1.5-374		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 06 109	1.0000	1.58E-01	1.04E-01	2.97E-01	4.66E-01	1.11E+00	1.34E+00	3.43E+00	5.90E-
INGESTION OF OTHER MEAT CROPS 06 109	1.0000	2.32E-02	1.40E-02	4.58E-02	7.41E-02	1.43E-01	1.79E-01	4.74E-01	5.90E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 86	1.0000	7.00E+03	3.74E+03	1.76E+04	2.32E+04	3.59E+04	4.23E+04	1.09E+05	1.08E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 86	1.0000	6.90E+03	3.64E+03	1.75E+04	2.31E+04	3.59E+04	4.23E+04	1.08E+05	1.08E-
TOTAL INGESTION PATHWAYS DOSE 04 326	1.0000	7.13E+01	5.54E+01	1.23E+02	1.46E+02	2.12E+02	2.38E+02	3.93E+02	1.52E-
LONG-TERM GROUNDSHINE DOSE 05 86	1.0000	6.86E+03	3.62E+03	1.73E+04	2.29E+04	3.57E+04	4.21E+04	1.07E+05	1.08E-
LONG-TERM RESUSPENSION DOSE 05 86	1.0000	4.08E+01	2.19E+01	1.05E+02	1.29E+02	2.08E+02	2.49E+02	6.19E+02	1.08E-
WATER INGESTION DOSE 06 86	1.0000	7.01E+00	4.57E+00	1.49E+01	2.07E+01	3.18E+01	3.70E+01	9.85E+01	7.64E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-283 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 30

SOURCE TERM 5 OF 10:
Case 4

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
1.00E-07	1.00E-07	1.00E-07	1.00E-08
2.00E-07	2.00E-07	2.00E-07	2.00E-08
3.00E-07	3.00E-07	3.00E-07	3.00E-08
5.00E-07	5.00E-07	5.00E-07	5.00E-08
7.00E-07	7.00E-07	7.00E-07	7.00E-08
1.00E-06	1.00E-06	1.00E-06	1.00E-07
2.00E-06	2.00E-06	2.00E-06	2.00E-07
3.00E-06	3.00E-06	3.00E-06	3.00E-07
5.00E-06	5.00E-06	5.00E-06	5.00E-07
7.00E-06	7.00E-06	7.00E-06	7.00E-07
1.00E-05	1.00E-05	1.00E-05	1.00E-06
2.00E-05	2.00E-05	2.00E-05	2.00E-06
3.00E-05	3.00E-05	3.00E-05	3.00E-06
5.00E-05	5.00E-05	5.00E-05	5.00E-06
7.00E-05	7.00E-05	7.00E-05	7.00E-06
1.00E-04	1.00E-04	1.00E-04	1.00E-05
2.00E-04	2.00E-04	2.00E-04	2.00E-05
3.00E-04	3.00E-04	3.00E-04	3.00E-05
5.00E-04	5.00E-04	5.00E-04	5.00E-05
7.00E-04	7.00E-04	7.00E-04	7.00E-05
1.00E-03	1.00E-03	1.00E-03	1.00E-04
2.00E-03	2.00E-03	2.00E-03	2.00E-04



Calcs. For ENVIRONMENTAL CONSEQUENCE			2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related	Rev. 2	Date
		Page 1.5-291 of 1.5-374		
Client PSEG Nuclear Development		Prepared by		
Project PSEG ESPA		Reviewed by		
Proj. No 12380-001		Approved by		
Equip. No.		Date		

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 6 OF 10:
 Case 5

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION

10-JAN-10 18:01:03	PAGE 32	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.74E+01	9.41E+00	4.50E+01	5.81E+01	8.35E+01	9.44E+01	2.78E+02	1.08E-
05 86		0.6018	6.74E-02	8.75E-04	1.79E-01	3.45E-01	1.01E+00	1.28E+00	6.38E+00	4.09E-
CAN FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
05 338		0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00		0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00		0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00		0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EARLY dose L-EDEWBODY > 0.250 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00		0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

POPULATION DOSE (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-292 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 05 338	TOT LIF 0-16.1 km	0.6018	1.44E+00	1.95E-02	3.96E+00	7.63E+00	2.08E+01	3.15E+01	1.36E+02	4.09E-
L-EDEWBODY 05 86	TOT LIF 0-80.5 km	1.0000	3.84E+02	2.04E+02	1.02E+03	1.24E+03	1.94E+03	2.19E+03	6.22E+03	1.08E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 05 86	0-80.5 km	1.0000	2.14E-06	1.14E-06	5.54E-06	7.13E-06	1.04E-05	1.15E-05	3.42E-05	1.08E-
CAN FAT/TOTAL 05 338	0-16.1 km	0.6018	1.11E-06	1.42E-08	3.00E-06	5.89E-06	1.60E-05	2.20E-05	1.05E-04	4.09E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 03 251	0-1.6 km	0.9959	1.54E-01	1.27E-01	2.51E-01	2.95E-01	3.37E-01	3.55E-01	3.70E-01	2.97E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page	1.5-295 of 1.5-374		

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 6 OF 10:
 Case 5

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 18:01:03	PAGE 34	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	6.64E+02	3.34E+02	1.94E+03	2.60E+03	3.46E+03	3.75E+03	5.82E+03	1.33E-	
04 334											
CAN FAT/TOTAL	0-16.1 km	1.0000	8.59E+00	5.08E+00	1.98E+01	2.66E+01	6.78E+01	7.54E+01	1.41E+02	2.26E-	
05 195											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	1.93E+02	1.11E+02	4.38E+02	6.08E+02	1.23E+03	1.50E+03	3.21E+03	2.26E-	
05 195											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.50E+04	7.81E+03	4.19E+04	5.90E+04	8.31E+04	9.21E+04	1.32E+05	1.33E-	
04 334											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	8.02E-05	3.92E-05	2.31E-04	3.17E-04	4.64E-04	5.16E-04	7.13E-04	1.33E-	
04 334											
CAN FAT/TOTAL	0-16.1 km	1.0000	1.09E-04	5.87E-05	2.61E-04	3.64E-04	9.52E-04	1.05E-03	1.60E-03	2.26E-	
05 195											

PEAK DOSE FOUND ON SPATIAL GRID (SV)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	1.5-301 of 1.5-374
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Prepared by	Date
		Reviewed by	Date
		Approved by	Date

MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 36

SOURCE TERM 6 OF 10:
Case 5

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	PROB>=X	X	PROB>=X
1.00E-07	1.00E+00	1.00E-07	1.00E-08
2.00E-07	1.00E+00	2.00E-07	2.00E-08
3.00E-07	1.00E+00	3.00E-07	3.00E-08
5.00E-07	1.00E+00	5.00E-07	5.00E-08
7.00E-07	1.00E+00	7.00E-07	7.00E-08
1.00E-06	1.00E+00	1.00E-06	1.00E-07
2.00E-06	1.00E+00	2.00E-06	2.00E-07
3.00E-06	1.00E+00	3.00E-06	3.00E-07
5.00E-06	1.00E+00	5.00E-06	5.00E-07
7.00E-06	1.00E+00	7.00E-06	7.00E-07
1.00E-05	1.00E+00	1.00E-05	1.00E-06
2.00E-05	1.00E+00	2.00E-05	2.00E-06
3.00E-05	1.00E+00	3.00E-05	3.00E-06
5.00E-05	1.00E+00	5.00E-05	5.00E-06
7.00E-05	1.00E+00	7.00E-05	7.00E-06
1.00E-04	1.00E+00	1.00E-04	1.00E-05
2.00E-04	1.00E+00	2.00E-04	2.00E-05
3.00E-04	1.00E+00	3.00E-04	3.00E-05
5.00E-04	1.00E+00	5.00E-04	5.00E-05
7.00E-04	1.00E+00	7.00E-04	7.00E-05
1.00E-03	9.99E-01	1.00E-03	1.00E-04
2.00E-03	9.99E-01	2.00E-03	2.00E-04
			5.16E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 7 OF 10:
 Case 6

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

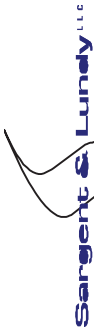
COHORT 1 = 95% EVACUATION

10-JAN-10 18:01:03	PAGE 38	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.52E+02	8.25E+01	3.68E+02	4.57E+02	6.00E+02	6.59E+02	8.33E+02	5.42E-
04 180	0-16.1 km	0.6056	4.95E-02	5.68E-04	1.35E-01	2.77E-01	6.52E-01	8.93E-01	6.01E+00	2.04E-
05 224	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										
EARLY dose L-EDEWBODY > 0.250 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00										

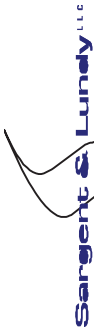
POPULATION DOSE (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
		Page 1.5-310 of 1.5-374	

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related		Prepared by	Date		Reviewed by	Date		Approved by	Date
L-EDEWBODY TOT LIF 05 224	0-16.1 km	0.6056	9.07E-01	1.06E-02	2.59E+00	5.08E+00	1.19E+01	1.47E+01	1.11E+02	2.04E-		
L-EDEWBODY TOT LIF 04 180	0-80.5 km	1.0000	3.07E+03	1.64E+03	7.75E+03	9.44E+03	1.21E+04	1.33E+04	1.81E+04	5.42E-		
POPULATION WEIGHTED RISK												
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
CAN FAT/TOTAL 04 180	0-80.5 km	1.0000	1.87E-05	1.02E-05	4.89E-05	5.68E-05	7.42E-05	7.98E-05	1.02E-04	5.42E-		
CAN FAT/TOTAL 05 224	0-16.1 km	0.6056	8.13E-07	9.35E-09	2.26E-06	4.47E-06	1.14E-05	1.41E-05	9.86E-05	2.04E-		
PEAK DOSE FOUND ON SPATIAL GRID (SV)												
L-EDEWBODY 02 139	0-1.6 km	0.9959	1.01E-01	9.04E-02	1.83E-01	2.17E-01	NOT-FOUND	NOT-FOUND	2.74E-01	1.22E-		



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-312 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY TOT LIF 04 175	0-16.1 km	1.0000	1.99E+02	1.00E+02	4.85E+02	6.83E+02	1.41E+03	1.87E+03	4.88E+03	4.38E-
L-EDEWBODY TOT LIF 04 180	0-80.5 km	1.0000	3.27E+03	1.87E+03	8.01E+03	9.91E+03	1.23E+04	1.35E+04	1.82E+04	5.42E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 0.00E+00	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 06 172	0-80.5 km	1.0000	2.01E-05	1.13E-05	5.11E-05	5.86E-05	7.52E-05	8.07E-05	1.05E-04	9.51E-
CAN FAT/TOTAL 04 175	0-16.1 km	1.0000	1.89E-04	8.71E-05	4.52E-04	6.86E-04	1.44E-03	1.92E-03	6.72E-03	4.38E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 373	0-1.6 km	1.0000	2.67E+00	2.44E+00	4.69E+00	5.15E+00	5.67E+00	5.91E+00	7.57E+00	2.85E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.5-313 of 1.5-374		

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

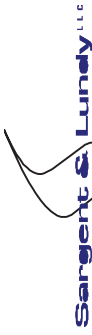
SOURCE TERM 7 OF 10:
Case 6

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 18:01:03	PAGE 40	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.48E+03	7.04E+02	3.72E+03	4.98E+03	6.91E+03	7.23E+03	1.03E+04	1.03E+04	9.51E-
06 155											
CAN FAT/TOTAL	0-16.1 km	1.0000	2.86E+01	2.11E+01	6.44E+01	8.37E+01	1.24E+02	1.41E+02	2.32E+02	2.32E+02	1.90E-
05 176											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	6.43E+02	4.68E+02	1.38E+03	1.86E+03	3.13E+03	3.36E+03	5.25E+03	5.25E+03	1.90E-
05 176											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	3.35E+04	1.67E+04	8.69E+04	1.06E+05	1.36E+05	1.52E+05	2.33E+05	2.33E+05	9.51E-
06 155											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	1.71E-04	8.10E-05	4.46E-04	5.70E-04	8.06E-04	9.05E-04	1.24E-03	1.24E-03	9.51E-
06 155											
CAN FAT/TOTAL	0-16.1 km	0.9989	3.24E-04	2.21E-04	7.61E-04	9.89E-04	1.36E-03	1.56E-03	2.28E-03	2.28E-03	1.40E-
05 163											

PEAK DOSE FOUND ON SPATIAL GRID (Sv)



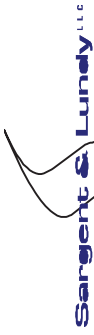
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev. 2	Date
Page 1.5-314 of 1.5-374	

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 03 285	0-1.6 km	0.2284	2.01E+00	0.00E+00	1.00E-01	1.06E-01	1.23E-01	NOT-FOUND	1.28E-01	6.66E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 176	0-16.1 km	1.0000	6.43E+02	4.68E+02	1.38E+03	1.86E+03	3.13E+03	3.36E+03	5.25E+03	1.90E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 163		0.9989	4.47E+02	3.07E+02	1.06E+03	1.40E+03	2.13E+03	2.27E+03	3.16E+03	1.40E-
TOTAL INGESTION PATHWAYS DOSE 04 175		1.0000	5.84E+01	4.07E+01	1.20E+02	1.73E+02	3.03E+02	3.46E+02	8.05E+02	1.52E-
LONG-TERM GROUNDSHINE DOSE 05 163		0.9989	4.46E+02	3.06E+02	1.06E+03	1.40E+03	2.13E+03	2.27E+03	3.15E+03	1.40E-
LONG-TERM RESUSPENSION DOSE 05 202		0.9989	1.14E+00	7.25E-01	2.80E+00	3.71E+00	6.08E+00	7.04E+00	1.06E+01	1.45E-
WATER INGESTION DOSE 04 175		0.9945	5.09E+01	3.35E+01	1.13E+02	1.65E+02	3.01E+02	3.42E+02	8.05E+02	1.52E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 367		0.9785	1.30E+02	6.37E+01	3.27E+02	4.64E+02	9.46E+02	1.10E+03	2.07E+03	1.24E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 86		0.9796	6.55E+00	6.07E+00	1.14E+01	1.31E+01	1.80E+01	2.02E+01	2.66E+01	1.13E-
INGESTION OF GRAINS 04 93		1.0000	2.25E-01	2.01E-01	3.87E-01	4.68E-01	7.13E-01	7.89E-01	1.22E+00	2.28E-
INGESTION OF LEAF VEG 05 201		1.0000	7.06E-01	6.23E-01	1.21E+00	1.44E+00	2.05E+00	2.19E+00	3.86E+00	1.33E-
INGESTION OF ROOT CROPS 05 201		1.0000	4.15E-01	3.55E-01	7.49E-01	8.76E-01	1.11E+00	1.20E+00	2.26E+00	1.33E-
INGESTION OF FRUITS 05 201		1.0000	2.08E+00	1.78E+00	3.62E+00	4.32E+00	6.34E+00	7.14E+00	1.15E+01	1.33E-
INGESTION OF LEGUMES 05 201		1.0000	8.21E-01	7.35E-01	1.37E+00	1.67E+00	2.31E+00	2.57E+00	4.56E+00	1.33E-
INGESTION OF BEEF 05 237		1.0000	1.59E+00	1.23E+00	3.12E+00	3.81E+00	5.59E+00	6.27E+00	1.01E+01	1.52E-
INGESTION OF MILK 04 285		1.0000	1.11E+00	8.48E-01	2.19E+00	2.82E+00	4.63E+00	5.66E+00	9.24E+00	5.71E-



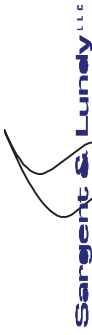
Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page		1.5-315 of 1.5-374

Client	PSEG Nuclear Development	Safety Related	<input type="checkbox"/>	Non-Safety Related	<input checked="" type="checkbox"/>	Prepared by	Date
Project	PSEG ESPA	Reviewed by		Approved by		Date	
Proj. No	12380-001	Equip. No.				Date	

INGESTION OF POULTRY 06 155	1.0000	4.39E-01	3.72E-01	7.87E-01	9.44E-01	1.27E+00	1.43E+00	4.03E+00	9.51E-
INGESTION OF OTHER MEAT CROPS 06 155	1.0000	6.21E-02	5.34E-02	1.12E-01	1.37E-01	2.07E-01	2.25E-01	5.62E-01	9.51E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 06 155	1.0000	3.35E+04	1.67E+04	8.69E+04	1.06E+05	1.36E+05	1.52E+05	2.33E+05	9.51E-
LONG-TERM DIRECT EXPOSURE PATHWAYS TOTAL INGESTION PATHWAYS DOSE 04 175	1.0000	3.16E+04	1.56E+04	8.33E+04	1.04E+05	1.28E+05	1.40E+05	2.30E+05	9.51E-
LONG-TERM GROUNDSHINE DOSE LONG-TERM RESUSPENSION DOSE 06 155	1.0000	3.14E+04	1.56E+04	8.29E+04	1.04E+05	1.28E+05	1.40E+05	2.28E+05	9.51E-
WATER INGESTION DOSE 04 175	1.0000	1.38E+02	9.42E+01	2.95E+02	3.75E+02	5.72E+02	6.48E+02	9.56E+02	1.52E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev. 2	Date
Page 1.5-317 of 1.5-374	

Client PSEG Nuclear Development	X	Non-Safety Related	Prepared by	Date
Project PSEG ESPA			Reviewed by	Date
Proj. No 12380-001		Equip. No.	Approved by	Date

POP.-DEPENDENT DECONTAMINATION COST 04 85	1.0000	4.93E+09	2.67E+09	1.22E+10	1.65E+10	2.76E+10	3.18E+10	4.53E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	1.0000	6.74E+07	5.58E+07	1.14E+08	1.31E+08	1.84E+08	2.08E+08	3.13E+08	3.42E-
POP.-DEPENDENT INTERDICTION COST 04 30	1.0000	1.33E+10	7.40E+09	3.67E+10	5.09E+10	6.84E+10	7.72E+10	1.07E+11	1.57E-
FARM-DEPENDENT INTERDICTION COST 04 59	1.0000	2.01E+08	1.51E+08	3.75E+08	4.71E+08	5.70E+08	6.08E+08	7.96E+08	3.42E-
POP.-DEPENDENT CONDEMNATION COST 04 168	0.5242	3.27E+07	6.22E+05	7.08E+07	1.12E+08	2.97E+08	1.09E+09	6.22E+09	7.19E-
FARM-DEPENDENT CONDEMNATION COST 04 217	0.9396	2.01E+06	9.51E+05	5.24E+06	6.92E+06	9.99E+06	2.12E+07	3.15E+07	1.64E-
EMERGENCY PHASE COST 06 4	1.0000	1.71E+08	8.37E+07	4.52E+08	6.28E+08	8.54E+08	9.45E+08	1.66E+09	9.51E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 04 59	1.0000	4.30E+06	1.80E+06	1.18E+07	1.63E+07	2.19E+07	2.32E+07	2.93E+07	2.57E-
CROP DISPOSAL COST 04 59	1.0000	1.88E+08	1.58E+08	3.01E+08	3.30E+08	4.07E+08	4.46E+08	5.32E+08	7.80E-
AFFECTED AREA/POPULATION 0-80.5 km									
FARM DECONTAMINATION (HECTARES) 04 59	1.0000	3.95E+04	3.21E+04	7.28E+04	8.01E+04	9.99E+04	1.11E+05	1.70E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	1.0000	5.01E+05	2.51E+05	1.39E+06	2.01E+06	2.55E+06	2.83E+06	4.14E+06	4.85E-
FARM INTERDICTION (HECTARES) 04 329	1.0000	8.01E+04	7.03E+04	1.42E+05	1.79E+05	2.10E+05	2.16E+05	2.43E+05	2.19E-
POP. INTERDICTION (INDIVIDUALS) 04 59	1.0000	5.01E+05	2.51E+05	1.39E+06	2.01E+06	2.55E+06	2.83E+06	4.14E+06	4.85E-
FARM CONDEMNATION (HECTARES) 04 217	0.9396	1.33E+02	6.05E+01	3.34E+02	4.95E+02	6.99E+02	1.15E+03	2.30E+03	1.64E-
POP. CONDEMNATION (INDIVIDUALS) 04 168	0.5242	1.12E+02	2.76E+00	2.04E+02	3.87E+02	9.33E+02	3.69E+03	1.98E+04	7.19E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-319 of 1.5-374

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
		Approved by		Date	

MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 42

SOURCE TERM 7 OF 10:
Case 6

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL		EMER. RESP. # 1		EMER. RESP. # 2		CHRONC RESULTS	
X	PROB>=X	X	PROB>=X	X	PROB>=X	X	PROB>=X
1.00E-07	1.00E+00	1.00E-08	9.96E-01	1.00E-06	1.00E+00	1.00E-09	2.28E-01
2.00E-07	1.00E+00	2.00E-08	9.96E-01	2.00E-06	1.00E+00	2.00E-09	2.21E-01
3.00E-07	1.00E+00	3.00E-08	9.96E-01	3.00E-06	1.00E+00	3.00E-09	2.21E-01
5.00E-07	1.00E+00	5.00E-08	9.96E-01	5.00E-06	1.00E+00	5.00E-09	2.21E-01
7.00E-07	1.00E+00	7.00E-08	9.96E-01	7.00E-06	1.00E+00	7.00E-09	2.21E-01
1.00E-06	1.00E+00	1.00E-07	9.96E-01	1.00E-05	1.00E+00	1.00E-08	2.21E-01
2.00E-06	1.00E+00	2.00E-07	9.96E-01	2.00E-05	1.00E+00	2.00E-08	2.21E-01
3.00E-06	1.00E+00	3.00E-07	9.96E-01	3.00E-05	1.00E+00	3.00E-08	2.21E-01
5.00E-06	1.00E+00	5.00E-07	9.96E-01	5.00E-05	1.00E+00	5.00E-08	2.21E-01
7.00E-06	1.00E+00	7.00E-07	9.96E-01	7.00E-05	1.00E+00	7.00E-08	2.21E-01
1.00E-05	1.00E+00	1.00E-06	9.96E-01	1.00E-04	1.00E+00	1.00E-07	2.21E-01
2.00E-05	1.00E+00	2.00E-06	9.96E-01	2.00E-04	1.00E+00	2.00E-07	2.21E-01
3.00E-05	1.00E+00	3.00E-06	9.96E-01	3.00E-04	1.00E+00	3.00E-07	2.21E-01
5.00E-05	1.00E+00	5.00E-06	9.96E-01	5.00E-04	1.00E+00	5.00E-07	2.21E-01
7.00E-05	1.00E+00	7.00E-06	9.96E-01	7.00E-04	1.00E+00	7.00E-07	2.21E-01
1.00E-04	1.00E+00	1.00E-05	9.96E-01	1.00E-03	1.00E+00	1.00E-06	2.21E-01
2.00E-04	1.00E+00	2.00E-05	9.96E-01	2.00E-03	1.00E+00	2.00E-06	2.21E-01
3.00E-04	1.00E+00	3.00E-05	9.96E-01	3.00E-03	1.00E+00	3.00E-06	2.21E-01
5.00E-04	1.00E+00	5.00E-05	9.96E-01	5.00E-03	1.00E+00	5.00E-06	2.21E-01
7.00E-04	1.00E+00	7.00E-05	9.96E-01	7.00E-03	1.00E+00	7.00E-06	2.21E-01
1.00E-03	1.00E+00	1.00E-04	9.96E-01	1.00E-02	1.00E+00	1.00E-05	2.21E-01
2.00E-03	1.00E+00	2.00E-04	9.96E-01	2.00E-02	1.00E+00	2.00E-05	2.21E-01



Calcs. For ENVIRONMENTAL CONSEQUENCE		2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 8 OF 10:
 Case 7

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

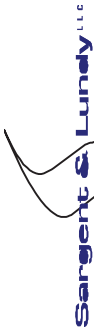
COHORT 1 = 95% EVACUATION

10-JAN-10 18:01:03	PAGE 44	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	CONS	PROB	
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	2.14E+02	1.17E+02	5.47E+02	6.56E+02	8.48E+02	9.35E+02	1.26E+03	9.51E-
06 172	0-16.1 km	0.6056	8.19E-02	9.23E-04	2.29E-01	4.52E-01	1.14E+00	1.41E+00	9.89E+00	2.04E-
05 224	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00	0									
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00	0									

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0									
EARLY dose L-EDEWBODY > 0.250 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0									

POPULATION DOSE (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page 1.5-328 of 1.5-374		

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

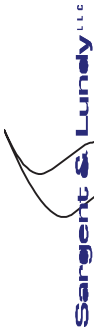
L-EDEWBODY 05 224	TOT LIF	0-16.1 km	0.6056	1.53E+00	1.60E-02	4.29E+00	8.67E+00	2.17E+01	2.80E+01	1.86E+02	2.04E-
L-EDEWBODY 06 172	TOT LIF	0-80.5 km	1.0000	4.28E+03	2.37E+03	1.06E+04	1.19E+04	1.54E+04	1.73E+04	2.45E+04	9.51E-

POPULATION WEIGHTED RISK

ERL FAT/TOTAL 0.00E+00	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 06 172		0-80.5 km	1.0000	2.62E-05	1.42E-05	6.81E-05	7.92E-05	1.03E-04	1.07E-04	1.55E-04	9.51E-
CAN FAT/TOTAL 05 224		0-16.1 km	0.6056	1.34E-06	1.43E-08	3.75E-06	7.71E-06	1.66E-05	2.15E-05	1.62E-04	2.04E-

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 02 139	0-1.6 km	0.9959	1.73E-01	1.48E-01	2.98E-01	3.46E-01	NOT-FOUND	NOT-FOUND	4.69E-01	1.22E-
----------------------	----------	--------	----------	----------	----------	----------	-----------	-----------	----------	--------



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-330 of 1.5-374

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

L-EDEWBODY 04 175	TOT LIF	0-16.1 km	1.0000	3.19E+02	1.54E+02	7.82E+02	1.13E+03	2.27E+03	2.92E+03	7.97E+03	4.38E-
L-EDEWBODY 06 172	TOT LIF	0-80.5 km	1.0000	4.60E+03	2.73E+03	1.09E+04	1.24E+04	1.66E+04	1.89E+04	2.54E+04	9.51E-

POPULATION WEIGHTED RISK

ERL FAT/TOTAL 0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL 06 172	0-80.5 km	1.0000	2.87E-05	1.67E-05	7.19E-05	8.38E-05	1.10E-04	1.05E-04	1.10E-04	1.61E-04	9.51E-
CAN FAT/TOTAL 04 175	0-16.1 km	1.0000	3.29E-04	1.39E-04	7.79E-04	3.76E-03	1.19E-02	2.62E-03	3.76E-03	1.19E-02	4.38E-

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 04 373	0-1.6 km	1.0000	4.30E+00	3.87E+00	7.68E+00	9.22E+00	1.05E+01	1.08E+01	1.22E+01	2.85E-
----------------------	----------	--------	----------	----------	----------	----------	----------	----------	----------	--------



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.5-331 of 1.5-374		

Client PSEG Nuclear Development	Prepared by	Date	
Project PSEG ESPA	Reviewed by	Date	
Proj. No 12380-001	Approved by	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

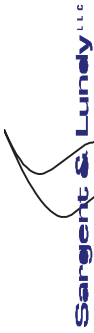
SOURCE TERM 8 OF 10:
Case 7

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 18:01:03	PAGE 46	PROB	QUANTILES					PEAK	PEAK
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	
TRIAL									
HEALTH EFFECTS CASES									
CAN FAT/TOTAL	0-80.5 km	1.0000	2.18E+03	1.12E+03	5.48E+03	6.98E+03	9.35E+03	1.02E+04	1.52E+04
06									9.51E-
CAN FAT/TOTAL	0-16.1 km	1.0000	3.26E+01	2.27E+01	7.38E+01	9.91E+01	1.71E+02	2.04E+02	2.61E+02
04									2.95E-
59									
POPULATION DOSE (Sv)									
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	7.22E+02	5.02E+02	1.67E+03	2.20E+03	3.34E+03	4.00E+03	5.91E+03
04									2.95E-
59									
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	4.93E+04	2.47E+04	1.17E+05	1.44E+05	2.15E+05	2.36E+05	3.45E+05
06									9.51E-
4									
POPULATION WEIGHTED RISK									
CAN FAT/TOTAL	0-80.5 km	1.0000	2.40E-04	1.20E-04	6.10E-04	7.71E-04	1.04E-03	1.09E-03	1.64E-03
06									9.51E-
4									
CAN FAT/TOTAL	0-16.1 km	0.9766	3.01E-04	1.63E-04	7.62E-04	1.04E-03	1.90E-03	2.11E-03	2.81E-03
04									2.95E-
59									

PEAK DOSE FOUND ON SPATIAL GRID (SV)



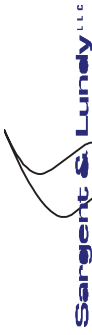
**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date
Page 1.5-333 of 1.5-374		

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 04 180	1.0000	6.13E-01	5.41E-01	1.13E+00	1.31E+00	1.84E+00	2.12E+00	3.30E+00	2.38E-
INGESTION OF OTHER MEAT CROPS 04 180	1.0000	8.44E-02	7.46E-02	1.54E-01	1.95E-01	2.69E-01	3.05E-01	4.56E-01	2.38E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 06 4	1.0000	4.93E+04	2.47E+04	1.17E+05	1.44E+05	2.15E+05	2.36E+05	3.45E+05	9.51E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 06 4	1.0000	4.43E+04	2.15E+04	1.09E+05	1.31E+05	2.00E+05	2.08E+05	3.03E+05	9.51E-
TOTAL INGESTION PATHWAYS DOSE 04 175	1.0000	5.59E+02	4.63E+02	1.00E+03	1.17E+03	1.67E+03	1.95E+03	2.84E+03	1.52E-
LONG-TERM GROUNDSHINE DOSE 06 4	1.0000	4.41E+04	2.14E+04	1.08E+05	1.30E+05	2.00E+05	2.08E+05	3.02E+05	9.51E-
LONG-TERM RESUSPENSION DOSE 04 180	1.0000	2.10E+02	9.32E+01	5.66E+02	7.39E+02	1.03E+03	1.10E+03	1.37E+03	5.42E-
WATER INGESTION DOSE 04 175	1.0000	3.96E+02	2.70E+02	8.47E+02	1.09E+03	1.56E+03	1.82E+03	2.74E+03	1.52E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev. 2	Date
Page 1.5-335 of 1.5-374	

Client PSEG Nuclear Development	X	Non-Safety Related	
Project PSEG ESPA			
Proj. No 12380-001		Equip. No.	
	Prepared by		Date
	Reviewed by		Date
	Approved by		Date

POP. -DEPENDENT DECONTAMINATION COST 04 59	1.0000	8.62E+09	4.35E+09	2.36E+10	3.06E+10	4.03E+10	4.54E+10	7.30E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	1.0000	1.09E+08	9.11E+07	1.91E+08	2.17E+08	2.70E+08	2.97E+08	4.83E+08	3.42E-
POP. -DEPENDENT INTERDICTION COST 04 85	1.0000	2.53E+10	1.30E+10	6.52E+10	7.74E+10	1.07E+11	1.24E+11	2.09E+11	4.85E-
FARM-DEPENDENT INTERDICTION COST 04 59	1.0000	2.50E+08	2.08E+08	4.52E+08	5.37E+08	6.95E+08	7.26E+08	8.43E+08	3.42E-
POP. -DEPENDENT CONDEMNATION COST 05 86	0.7934	4.02E+08	3.68E+07	1.22E+09	1.74E+09	5.06E+09	5.19E+09	6.50E+09	1.24E-
FARM-DEPENDENT CONDEMNATION COST 05 86	0.9634	9.52E+06	4.47E+06	2.60E+07	3.02E+07	3.20E+07	3.29E+07	4.13E+07	1.13E-
EMERGENCY PHASE COST 04 85	1.0000	2.13E+08	1.13E+08	5.54E+08	7.22E+08	1.02E+09	1.17E+09	1.74E+09	7.23E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 04 329	1.0000	5.55E+06	2.40E+06	1.46E+07	2.04E+07	2.36E+07	2.52E+07	3.15E+07	1.81E-
CROP DISPOSAL COST 04 329	1.0000	2.11E+08	1.98E+08	3.13E+08	3.43E+08	4.22E+08	4.62E+08	5.71E+08	1.43E-
AFFECTED AREA/POPULATION 0-80.5 km									
FARM DECONTAMINATION (HECTARES) 04 59	1.0000	5.46E+04	4.59E+04	9.04E+04	1.05E+05	1.39E+05	1.56E+05	2.28E+05	3.42E-
POP. DECONTAMINATION (INDIVIDUALS) 04 59	1.0000	6.93E+05	3.71E+05	1.68E+06	2.19E+06	3.18E+06	3.68E+06	5.45E+06	4.85E-
FARM INTERDICTION (HECTARES) 04 329	1.0000	8.87E+04	7.71E+04	1.52E+05	1.91E+05	2.18E+05	2.27E+05	2.64E+05	3.52E-
POP. INTERDICTION (INDIVIDUALS) 04 59	1.0000	6.93E+05	3.71E+05	1.68E+06	2.19E+06	3.18E+06	3.68E+06	5.45E+06	4.85E-
FARM CONDEMNATION (HECTARES) 05 86	0.9634	6.02E+02	2.87E+02	1.60E+03	2.02E+03	2.18E+03	2.25E+03	3.02E+03	1.13E-
POP. CONDEMNATION (INDIVIDUALS) 05 86	0.7934	1.41E+03	1.34E+02	5.06E+03	6.39E+03	1.07E+04	1.25E+04	2.07E+04	1.24E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-337 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 48

SOURCE TERM 8 OF 10:
Case 7

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-07	1.00E-07	1.00E-06	1.00E-09
2.00E-07	2.00E-07	2.00E-06	2.00E-09
3.00E-07	3.00E-07	3.00E-06	3.00E-09
5.00E-07	5.00E-07	5.00E-06	5.00E-09
7.00E-07	7.00E-07	7.00E-06	7.00E-09
1.00E-06	1.00E-06	1.00E-05	1.00E-08
2.00E-06	2.00E-06	2.00E-05	2.00E-08
3.00E-06	3.00E-06	3.00E-05	3.00E-08
5.00E-06	5.00E-06	5.00E-05	5.00E-08
7.00E-06	7.00E-06	7.00E-05	7.00E-08
1.00E-05	1.00E-05	1.00E-04	1.00E-07
2.00E-05	2.00E-05	2.00E-04	2.00E-07
3.00E-05	3.00E-05	3.00E-04	3.00E-07
5.00E-05	5.00E-05	5.00E-04	5.00E-07
7.00E-05	7.00E-05	7.00E-04	7.00E-07
1.00E-04	1.00E-04	1.00E-03	1.00E-06
2.00E-04	2.00E-04	2.00E-03	2.00E-06
3.00E-04	3.00E-04	3.00E-03	3.00E-06
5.00E-04	5.00E-04	5.00E-03	5.00E-06
7.00E-04	7.00E-04	7.00E-03	7.00E-06
1.00E-03	1.00E-03	1.00E-02	1.00E-05
2.00E-03	2.00E-03	2.00E-02	2.00E-05
3.00E-03	3.00E-03	3.00E-02	3.00E-05
5.00E-03	5.00E-03	5.00E-02	5.00E-05
7.00E-03	7.00E-03	7.00E-02	7.00E-05
1.00E-02	1.00E-02	1.00E-01	1.00E-04
2.00E-02	2.00E-02	2.00E-01	2.00E-04
3.00E-02	3.00E-02	3.00E-01	3.00E-04
5.00E-02	5.00E-02	5.00E-01	5.00E-04
7.00E-02	7.00E-02	7.00E-01	7.00E-04
1.00E-01	1.00E-01	1.00E-00	1.00E-03
2.00E-01	2.00E-01	2.00E-00	2.00E-03
3.00E-01	3.00E-01	3.00E-00	3.00E-03
5.00E-01	5.00E-01	5.00E-00	5.00E-03
7.00E-01	7.00E-01	7.00E-00	7.00E-03
1.00E+00	1.00E+00	1.00E+00	1.00E-02
2.00E+00	2.00E+00	2.00E+00	2.00E-02
3.00E+00	3.00E+00	3.00E+00	3.00E-02
5.00E+00	5.00E+00	5.00E+00	5.00E-02
7.00E+00	7.00E+00	7.00E+00	7.00E-02
1.00E+01	1.00E+01	1.00E+00	1.00E-01
2.00E+01	2.00E+01	2.00E+00	2.00E-01
3.00E+01	3.00E+01	3.00E+00	3.00E-01
5.00E+01	5.00E+01	5.00E+00	5.00E-01
7.00E+01	7.00E+01	7.00E+00	7.00E-01
1.00E+02	1.00E+02	1.00E+00	1.00E-00
2.00E+02	2.00E+02	2.00E+00	2.00E-00
3.00E+02	3.00E+02	3.00E+00	3.00E-00
5.00E+02	5.00E+02	5.00E+00	5.00E-00
7.00E+02	7.00E+02	7.00E+00	7.00E-00
1.00E+03	1.00E+03	1.00E+00	1.00E-00
2.00E+03	2.00E+03	2.00E+00	2.00E-00
3.00E+03	3.00E+03	3.00E+00	3.00E-00
5.00E+03	5.00E+03	5.00E+00	5.00E-00
7.00E+03	7.00E+03	7.00E+00	7.00E-00
1.00E+04	1.00E+04	1.00E+00	1.00E-00
2.00E+04	2.00E+04	2.00E+00	2.00E-00
3.00E+04	3.00E+04	3.00E+00	3.00E-00
5.00E+04	5.00E+04	5.00E+00	5.00E-00
7.00E+04	7.00E+04	7.00E+00	7.00E-00
1.00E+05	1.00E+05	1.00E+00	1.00E-00
2.00E+05	2.00E+05	2.00E+00	2.00E-00
3.00E+05	3.00E+05	3.00E+00	3.00E-00
5.00E+05	5.00E+05	5.00E+00	5.00E-00
7.00E+05	7.00E+05	7.00E+00	7.00E-00
1.00E+06	1.00E+06	1.00E+00	1.00E-00
2.00E+06	2.00E+06	2.00E+00	2.00E-00
3.00E+06	3.00E+06	3.00E+00	3.00E-00
5.00E+06	5.00E+06	5.00E+00	5.00E-00
7.00E+06	7.00E+06	7.00E+00	7.00E-00
1.00E+07	1.00E+07	1.00E+00	1.00E-00
2.00E+07	2.00E+07	2.00E+00	2.00E-00
3.00E+07	3.00E+07	3.00E+00	3.00E-00
5.00E+07	5.00E+07	5.00E+00	5.00E-00
7.00E+07	7.00E+07	7.00E+00	7.00E-00
1.00E+08	1.00E+08	1.00E+00	1.00E-00
2.00E+08	2.00E+08	2.00E+00	2.00E-00
3.00E+08	3.00E+08	3.00E+00	3.00E-00
5.00E+08	5.00E+08	5.00E+00	5.00E-00
7.00E+08	7.00E+08	7.00E+00	7.00E-00
1.00E+09	1.00E+09	1.00E+00	1.00E-00
2.00E+09	2.00E+09	2.00E+00	2.00E-00
3.00E+09	3.00E+09	3.00E+00	3.00E-00
5.00E+09	5.00E+09	5.00E+00	5.00E-00
7.00E+09	7.00E+09	7.00E+00	7.00E-00
1.00E+10	1.00E+10	1.00E+00	1.00E-00
2.00E+10	2.00E+10	2.00E+00	2.00E-00
3.00E+10	3.00E+10	3.00E+00	3.00E-00
5.00E+10	5.00E+10	5.00E+00	5.00E-00
7.00E+10	7.00E+10	7.00E+00	7.00E-00



Calcs. For ENVIRONMENTAL CONSEQUENCE		2009-11222	
ANALYSIS FOR PSEG ESPA			
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 9 OF 10:
 Case 8

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION

10-JAN-10 18:01:03	PAGE 50	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	5.09E+02	2.68E+02	1.25E+03	1.64E+03	2.43E+03	2.76E+03	4.55E+03	3.81E-
05 283		0.6059	2.17E-01	2.38E-03	6.18E-01	1.17E+00	2.81E+00	3.54E+00	2.58E+01	2.04E-
CAN FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
05 224		0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00		0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00		0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00		0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
EARLY dose L-EDEWBODY > 0.250 Sv	0.0886	8.34E+02	0.00E+00	0.00E+00	0.00E+00	3.07E+03	2.31E+04	2.71E+04	8.61E+04	3.14E-
04 249										

POPULATION DOSE (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.5-346 of 1.5-374	
Non-Safety Related			

Client	PSEG Nuclear Development			Prepared by		Date	
Project	PSEG ESPA			Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by		Date	

L-EDEWBODY 05 224	TOT LIF	0-16.1 km	0.6059	4.01E+00	4.30E-02	1.08E+01	2.30E+01	5.56E+01	6.86E+01	4.80E+02	2.04E-
L-EDEWBODY 04 258	TOT LIF	0-80.5 km	1.0000	9.64E+03	5.25E+03	2.52E+04	3.11E+04	3.87E+04	4.25E+04	6.69E+04	1.14E-

POPULATION WEIGHTED RISK

ERL FAT/TOTAL	0	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL	0	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	05 283	0-80.5 km	1.0000	6.25E-05	3.31E-05	1.54E-04	2.11E-04	3.11E-04	3.37E-04	5.59E-04	3.81E-
CAN FAT/TOTAL	05 224	0-16.1 km	0.6059	3.57E-06	3.84E-08	9.79E-06	2.03E-05	4.67E-05	6.39E-05	4.24E-04	2.04E-

PEAK DOSE FOUND ON SPATIAL GRID (SV)

L-EDEWBODY 04 43	0-1.6 km	0.9959	3.71E-01	3.40E-01	6.74E-01	7.68E-01	1.00E+00	1.02E+00	1.13E+00	2.57E-
---------------------	----------	--------	----------	----------	----------	----------	----------	----------	----------	--------



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-348 of 1.5-374

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related							
L-EDEWBODY 04 175	TOT LIF 0-16.1 km	1.0000	7.93E+02	3.61E+02	1.95E+03	2.77E+03	5.83E+03	7.73E+03	1.92E+04	4.38E-
L-EDEWBODY 04 258	TOT LIF 0-80.5 km	1.0000	1.04E+04	5.97E+03	2.69E+04	3.24E+04	4.30E+04	4.85E+04	6.94E+04	1.14E-
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL 05 43	0-80.5 km	0.0164	9.43E-11	0.00E+00	0.00E+00	0.00E+00	8.64E-10	2.97E-09	1.72E-07	1.29E-
ERL FAT/TOTAL 0.00E+00	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 05 43	3.2-4.8 km	0.0162	6.19E-06	0.00E+00	0.00E+00	0.00E+00	5.97E-05	2.02E-04	9.91E-03	1.29E-
CAN FAT/TOTAL 05 283	0-80.5 km	1.0000	7.02E-05	3.93E-05	1.73E-04	2.24E-04	3.16E-04	3.42E-04	5.63E-04	3.81E-
CAN FAT/TOTAL 04 175	0-16.1 km	1.0000	1.04E-03	4.02E-04	2.65E-03	3.87E-03	8.38E-03	1.09E-02	2.97E-02	4.38E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)										
L-EDEWBODY 04 43	0-1.6 km	1.0000	8.98E+00	8.23E+00	1.48E+01	1.80E+01	2.14E+01	2.23E+01	2.62E+01	2.57E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date	
Page		1.5-349 of 1.5-374	

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

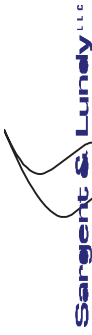
SOURCE TERM 9 OF 10:
 Case 8

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

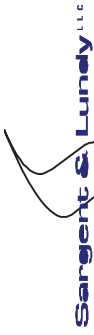
10-JAN-10 18:01:03	PAGE 52	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	3.00E+03	1.48E+03	7.97E+03	1.00E+04	1.24E+04	1.35E+04	1.83E+04	4.85E-	
04 85											
CAN FAT/TOTAL	0-16.1 km	1.0000	3.83E+01	3.06E+01	8.41E+01	1.09E+02	1.54E+02	1.80E+02	2.88E+02	1.45E-	
05 202											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	8.34E+02	6.75E+02	1.86E+03	2.36E+03	3.44E+03	3.88E+03	6.52E+03	1.45E-	
05 202											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	6.79E+04	3.25E+04	1.77E+05	2.21E+05	3.01E+05	3.24E+05	4.16E+05	4.85E-	
04 85											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	3.14E-04	1.50E-04	8.59E-04	1.02E-03	1.14E-03	1.19E-03	1.73E-03	1.90E-	
05 288											
CAN FAT/TOTAL	0-16.1 km	0.9764	2.98E-04	1.76E-04	6.93E-04	1.04E-03	1.42E-03	1.62E-03	2.95E-03	1.45E-	
05 202											

PEAK DOSE FOUND ON SPATIAL GRID (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA				
Safety Related	X	Non-Safety Related	Rev. 2	Date
			Page 1.5-350 of 1.5-374	
Client	PSEG Nuclear Development			
Project	PSEG ESPA			
Proj. No	12380-001			
Equip. No.				
Prepared by				
Reviewed by				
Approved by				

L-EDEWBODY 03 306	0-1.6 km	0.1299	1.04E-02	0.00E+00	4.59E-04	1.04E-01	1.19E-01	1.26E-01	1.29E-01	3.82E-
L-EDEWBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 05 202	0-16.1 km	1.0000	8.34E+02	6.75E+02	1.86E+03	2.36E+03	3.44E+03	3.88E+03	6.52E+03	1.45E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 202		0.9764	4.12E+02	2.52E+02	9.65E+02	1.28E+03	2.15E+03	2.40E+03	4.09E+03	1.45E-
TOTAL INGESTION PATHWAYS DOSE 04 175		1.0000	2.99E+02	2.05E+02	6.99E+02	9.81E+02	1.72E+03	2.10E+03	4.65E+03	1.52E-
LONG-TERM GROUNDSHINE DOSE 05 202		0.9764	4.11E+02	2.51E+02	9.65E+02	1.28E+03	2.15E+03	2.40E+03	4.09E+03	1.45E-
LONG-TERM RESUSPENSION DOSE 04 268		0.9764	1.03E+00	5.19E-01	2.55E+00	3.59E+00	6.07E+00	7.02E+00	9.64E+00	1.42E-
WATER INGESTION DOSE 04 175		0.9945	2.90E+02	1.91E+02	6.84E+02	9.65E+02	1.69E+03	2.07E+03	4.65E+03	1.52E-
POP.-DEPENDENT DECONTAMINATION DOSE 04 59		0.9298	1.16E+02	5.85E+01	2.76E+02	4.18E+02	8.87E+02	1.10E+03	2.37E+03	1.33E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 201		0.9534	7.06E+00	5.34E+00	1.42E+01	1.88E+01	2.91E+01	3.14E+01	4.98E+01	1.33E-
INGESTION OF GRAINS 04 182		1.0000	2.96E-01	2.42E-01	5.70E-01	7.03E-01	1.05E+00	1.16E+00	1.51E+00	7.61E-
INGESTION OF LEAF VEG 04 182		1.0000	9.26E-01	7.68E-01	1.70E+00	2.19E+00	3.26E+00	3.61E+00	4.79E+00	7.61E-
INGESTION OF ROOT CROPS 04 182		1.0000	5.47E-01	4.61E-01	1.06E+00	1.29E+00	2.00E+00	2.19E+00	2.81E+00	7.61E-
INGESTION OF FRUITS 04 182		1.0000	2.76E+00	2.25E+00	5.42E+00	6.67E+00	1.01E+01	1.11E+01	1.43E+01	7.61E-
INGESTION OF LEGUMES 04 182		1.0000	1.09E+00	9.24E-01	2.16E+00	2.70E+00	4.05E+00	4.77E+00	5.66E+00	7.61E-
INGESTION OF BEEF 04 59		1.0000	1.69E+00	1.26E+00	3.44E+00	4.33E+00	6.09E+00	6.84E+00	8.23E+00	4.19E-
INGESTION OF MILK 04 59		1.0000	1.12E+00	8.86E-01	2.29E+00	2.94E+00	3.97E+00	4.50E+00	5.43E+00	4.19E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-351 of 1.5-374

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

INGESTION OF POULTRY 04 182	1.0000	5.51E-01	4.60E-01	1.07E+00	1.29E+00	2.00E+00	2.21E+00	2.92E+00	7.61E-
INGESTION OF OTHER MEAT CROPS 04 182	1.0000	7.59E-02	6.39E-02	1.41E-01	1.83E-01	2.88E-01	3.20E-01	4.01E-01	7.61E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 04 85	1.0000	6.79E+04	3.25E+04	1.77E+05	2.21E+05	3.01E+05	3.24E+05	4.16E+05	4.85E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 288	1.0000	5.80E+04	2.69E+04	1.41E+05	1.97E+05	2.40E+05	2.59E+05	3.19E+05	1.90E-
TOTAL INGESTION PATHWAYS DOSE 04 175	1.0000	1.01E+03	7.60E+02	1.95E+03	2.55E+03	3.51E+03	3.84E+03	6.00E+03	1.52E-
LONG-TERM GROUNDSHINE DOSE 05 288	1.0000	5.78E+04	2.68E+04	1.40E+05	1.95E+05	2.39E+05	2.59E+05	3.18E+05	1.90E-
LONG-TERM RESUSPENSION DOSE 05 63	1.0000	2.39E+02	9.78E+01	7.19E+02	8.28E+02	1.03E+03	1.07E+03	1.39E+03	1.79E-
WATER INGESTION DOSE 04 175	1.0000	8.33E+02	5.66E+02	1.80E+03	2.41E+03	3.42E+03	3.74E+03	5.86E+03	1.52E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page 1.5-353 of 1.5-374	

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

POP.-DEPENDENT DECONTAMINATION COST 04 59	1.0000	1.10E+10	5.44E+09	3.03E+10	3.69E+10	5.37E+10	8.34E+10	4.85E-
FARM-DEPENDENT DECONTAMINATION COST 04 59	1.0000	1.37E+08	1.13E+08	2.30E+08	2.68E+08	3.42E+08	5.42E+08	3.42E-
POP.-DEPENDENT INTERDICTION COST 06 4	1.0000	4.08E+10	2.09E+10	1.04E+11	1.28E+11	2.05E+11	4.34E+11	9.51E-
FARM-DEPENDENT INTERDICTION COST 04 85	1.0000	2.98E+08	2.52E+08	5.28E+08	6.17E+08	7.51E+08	9.43E+08	3.42E-
POP.-DEPENDENT CONDEMNATION COST 05 86	0.8714	3.29E+09	3.77E+08	5.77E+09	1.03E+10	5.08E+10	5.58E+10	2.57E-
FARM-DEPENDENT CONDEMNATION COST 05 74	0.9440	2.35E+07	2.14E+07	4.40E+07	9.94E+07	1.08E+08	1.11E+08	5.80E-
EMERGENCY PHASE COST 04 59	1.0000	3.57E+08	1.69E+08	1.01E+09	1.11E+09	1.36E+09	1.48E+09	4.85E-
INTERMEDIATE PHASE COST 0.00E+00 0	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MILK DISPOSAL COST 04 329	1.0000	6.12E+06	2.64E+06	1.64E+07	2.08E+07	2.39E+07	3.15E+07	1.81E-
CROP DISPOSAL COST 04 329	1.0000	2.29E+08	2.10E+08	3.20E+08	3.49E+08	4.27E+08	5.71E+08	1.43E-
AFFECTED AREA/POPULATION 0-80.5 km								
FARM DECONTAMINATION (HECTARES) 05 201	1.0000	6.92E+04	5.75E+04	1.18E+05	1.41E+05	2.01E+05	2.28E+05	2.15E-
POP. DECONTAMINATION (INDIVIDUALS) 05 201	1.0000	9.06E+05	4.18E+05	2.27E+06	3.13E+06	5.01E+06	5.44E+06	1.27E-
FARM INTERDICTION (HECTARES) 04 329	1.0000	9.46E+04	8.07E+04	1.58E+05	2.00E+05	2.19E+05	2.64E+05	3.52E-
POP. INTERDICTION (INDIVIDUALS) 05 201	1.0000	9.06E+05	4.18E+05	2.27E+06	3.13E+06	5.01E+06	5.44E+06	1.27E-
FARM CONDEMNATION (HECTARES) 05 74	0.9440	1.50E+03	1.16E+03	2.87E+03	5.85E+03	7.47E+03	7.76E+03	5.80E-
POP. CONDEMNATION (INDIVIDUALS) 05 86	0.8714	1.17E+04	1.37E+03	2.38E+04	4.48E+04	1.88E+05	2.01E+05	1.13E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page 1.5-355 of 1.5-374

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
	Date
	Date
	Date

MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 54

SOURCE TERM 9 OF 10:
Case 8

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL	EMER. RESP. # 1	EMER. RESP. # 2	CHRONC RESULTS
X	X	X	X
PROB>=X	PROB>=X	PROB>=X	PROB>=X
1.00E-07	1.00E-07	1.00E-05	1.00E-09
2.00E-07	2.00E-07	2.00E-05	2.00E-09
3.00E-07	3.00E-07	3.00E-05	3.00E-09
5.00E-07	5.00E-07	5.00E-05	5.00E-09
7.00E-07	7.00E-07	7.00E-05	7.00E-09
1.00E-06	1.00E-06	1.00E-04	1.00E-08
2.00E-06	2.00E-06	2.00E-04	2.00E-08
3.00E-06	3.00E-06	3.00E-04	3.00E-08
5.00E-06	5.00E-06	5.00E-04	5.00E-08
7.00E-06	7.00E-06	7.00E-04	7.00E-08
1.00E-05	1.00E-05	1.00E-03	1.00E-07
2.00E-05	2.00E-05	2.00E-03	2.00E-07
3.00E-05	3.00E-05	3.00E-03	3.00E-07
5.00E-05	5.00E-05	5.00E-03	5.00E-07
7.00E-05	7.00E-05	7.00E-03	7.00E-07
1.00E-04	1.00E-04	1.00E-02	1.00E-06
2.00E-04	2.00E-04	2.00E-02	2.00E-06
3.00E-04	3.00E-04	3.00E-02	3.00E-06
5.00E-04	5.00E-04	5.00E-02	5.00E-06
7.00E-04	7.00E-04	7.00E-02	7.00E-06
1.00E-03	1.00E-03	1.00E-01	1.00E-05
2.00E-03	2.00E-03	2.00E-01	2.00E-05
3.00E-03	3.00E-03	3.00E-01	3.00E-05
5.00E-03	5.00E-03	5.00E-01	5.00E-05
7.00E-03	7.00E-03	7.00E-01	7.00E-05

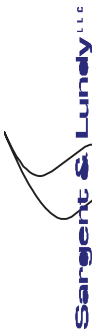


Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-362 of 1.5-374

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

	Safety Related	X	Non-Safety Related					
ERL FAT/TOTAL 0.00E+00 0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00 0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
POPULATION EXCEEDING DOSE								
EARLY dose L-EDEWBODY > 2.00 Sv 04 175		0.3318	1.04E+00	0.00E+00	1.33E+00	3.91E+00	1.33E+01	4.28E+02
EARLY dose L-EDEWBODY > 0.250 Sv 03 217		0.8551	2.22E+03	3.38E+01	2.60E+03	1.06E+04	7.32E+04	8.62E+04
POPULATION DOSE (Sv)								
L-EDEWBODY TOT LIF 04 217	0-16.1 km	1.0000	1.39E+03	1.11E+03	3.00E+03	3.59E+03	5.27E+03	1.03E+04
L-EDEWBODY TOT LIF 06 4	0-80.5 km	1.0000	9.64E+04	5.17E+04	2.54E+05	3.14E+05	3.80E+05	6.05E+05
POPULATION WEIGHTED RISK								
ERL FAT/TOTAL 05 176	0-80.5 km	0.0708	7.21E-11	0.00E+00	0.00E+00	4.58E-11	1.56E-09	8.14E-08
ERL FAT/TOTAL 0.00E+00 0	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 0.00E+00 0	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL FAT/TOTAL 05 176	3.2-4.8 km	0.0595	2.66E-06	0.00E+00	0.00E+00	1.47E-06	3.77E-05	3.80E-03
CAN FAT/TOTAL 06 172	0-80.5 km	1.0000	4.59E-04	2.29E-04	1.09E-03	1.24E-03	1.69E-03	2.53E-03
CAN FAT/TOTAL 04 217	0-16.1 km	1.0000	4.60E-04	3.26E-04	1.02E-03	1.31E-03	2.07E-03	2.84E-03
PEAK DOSE FOUND ON SPATIAL GRID (Sv)								
L-EDEWBODY 04 373	0-1.6 km	1.0000	8.06E-01	7.40E-01	1.17E+00	1.29E+00	1.62E+00	2.28E+00



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			Rev. 2	Date
Safety Related	X	Non-Safety Related	Page 1.5-363 of 1.5-374	
Client PSEG Nuclear Development		Prepared by		
Project PSEG ESPA		Reviewed by		
Proj. No 12380-001		Approved by		
Equip. No.		Date		

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 10 OF 10:
 Case 9

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION

10-JAN-10 18:01:03	PAGE 56	PROB	QUANTILES					PEAK	PEAK	
PEAK	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB	
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	7.29E+02	3.87E+02	1.87E+03	2.41E+03	3.41E+03	3.76E+03	5.91E+03	1.24E-
04 258										
CAN FAT/TOTAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00									
EARLY dose L-EDEWBODY > 0.250 Sv	0.1425	2.14E+03	0.00E+00	2.53E+03	1.06E+04	7.43E+04	8.21E+04	8.61E+04	3.58E-
03 10									

POPULATION DOSE (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA			Rev. 2	Date
Safety Related	X	Non-Safety Related	Page 1.5-365 of 1.5-374	
Client PSEG Nuclear Development		Prepared by	Date	
Project PSEG ESPA		Reviewed by	Date	
Proj. No 12380-001		Approved by	Date	
Equip. No.				

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

SOURCE TERM 10 OF 10:
 Case 9

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

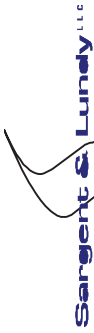
COHORT 2 = NO EVACUATION

10-JAN-10 18:01:03	PAGE 57	PROB	QUANTILES					PEAK	PEAK	
PEAK		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	8.31E+02	4.75E+02	2.10E+03	2.67E+03	3.58E+03	3.94E+03	5.94E+03	1.24E-
04 258	0-16.1 km	1.0000	1.02E+02	4.32E+01	2.55E+02	3.70E+02	7.81E+02	1.02E+03	2.84E+03	4.38E-
04 175	0-80.5 km	0.0708	1.17E-02	0.00E+00	0.00E+00	7.24E-03	2.76E-01	4.95E-01	1.32E+01	5.71E-
05 176	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
0.00E+00										
ERL FAT/TOTAL										
0.00E+00										

POPULATION EXCEEDING DOSE

EARLY dose L-EDEWBODY > 2.00 Sv	0.3318	2.08E+01	0.00E+00	3.25E+01	8.17E+01	2.99E+02	4.45E+02	8.55E+03	4.38E-
04 175									
EARLY dose L-EDEWBODY > 0.250 Sv	0.8551	3.72E+03	5.22E+02	7.02E+03	1.57E+04	7.36E+04	8.00E+04	8.83E+04	2.20E-
03 217									

POPULATION DOSE (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page 1.5-366 of 1.5-374	
Client PSEG Nuclear Development		Prepared by	
Project PSEG ESPA		Reviewed by	
Proj. No 12380-001		Approved by	
	Equip. No.		

L-EDEWBODY 04 175	TOT LIF	0-16.1 km	1.0000	1.19E+03	5.83E+02	2.93E+02	4.11E+03	8.43E+03	1.08E+04	3.00E+04	4.38E-
L-EDEWBODY 06 172	TOT LIF	0-80.5 km	1.0000	1.46E+04	8.48E+03	3.56E+04	4.44E+04	5.85E+04	6.38E+04	9.25E+04	9.51E-
POPULATION WEIGHTED RISK											
ERL FAT/TOTAL 05 176		0-80.5 km	0.0708	1.44E-09	0.00E+00	0.00E+00	9.31E-10	3.28E-08	6.01E-08	1.63E-06	5.71E-
ERL FAT/TOTAL 0.00E+00		0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL 0.00E+00		0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
ERL FAT/TOTAL 05 176		3.2-4.8 km	0.0595	5.33E-05	0.00E+00	0.00E+00	2.78E-05	7.76E-04	1.80E-03	7.61E-02	5.71E-
CAN FAT/TOTAL 04 258		0-80.5 km	1.0000	1.02E-04	5.87E-05	2.55E-04	3.24E-04	4.86E-04	5.32E-04	7.30E-04	1.24E-
CAN FAT/TOTAL 04 175		0-16.1 km	1.0000	1.67E-03	7.19E-04	4.16E-03	6.14E-03	1.26E-02	1.73E-02	4.66E-02	4.38E-
PEAK DOSE FOUND ON SPATIAL GRID (SV)											
L-EDEWBODY 04 373		0-1.6 km	1.0000	1.61E+01	1.35E+01	2.98E+01	3.15E+01	3.54E+01	3.72E+01	4.56E+01	2.85E-



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	1.5-367 of 1.5-374		

Client PSEG Nuclear Development	X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001		Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

DATE AND TIME OF RUN = MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden
 "ATMOS" DESCRIPTION = ABWR ATMOS INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "EARLY" DESCRIPTION = GENERAL EARLY INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS
 "CHRONC" DESCRIPTION = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

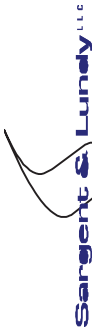
SOURCE TERM 10 OF 10:
Case 9

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = GENERAL CHRONC INPUT FOR PSEG ESP ER 7.2 CONSEQUENCE ANALYSIS

10-JAN-10 18:01:03	PAGE 58	PROB	QUANTILES					PEAK	PEAK		
			NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONC	PROB
TRIAL											
HEALTH EFFECTS CASES											
CAN FAT/TOTAL	0-80.5 km	1.0000	3.67E+03	1.78E+03	1.03E+04	1.14E+04	1.46E+04	1.62E+04	1.62E+04	2.40E+04	9.51E-
06											
CAN FAT/TOTAL	0-16.1 km	1.0000	6.18E+01	5.20E+01	1.22E+02	1.59E+02	2.36E+02	2.65E+02	4.92E+02	4.92E+02	1.64E-
04 217											
POPULATION DOSE (Sv)											
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	1.33E+03	1.08E+03	2.85E+03	3.50E+03	5.19E+03	5.81E+03	5.81E+03	1.02E+04	1.64E-
04 217											
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	8.30E+04	3.95E+04	2.25E+05	2.81E+05	3.27E+05	3.41E+05	3.41E+05	5.44E+05	9.51E-
06 4											
POPULATION WEIGHTED RISK											
CAN FAT/TOTAL	0-80.5 km	1.0000	3.69E-04	1.68E-04	1.03E-03	1.12E-03	1.37E-03	1.50E-03	1.50E-03	2.08E-03	4.85E-
04 59											
CAN FAT/TOTAL	0-16.1 km	0.9680	3.76E-04	2.43E-04	8.63E-04	1.09E-03	1.56E-03	1.81E-03	1.81E-03	2.75E-03	3.81E-
05 147											

PEAK DOSE FOUND ON SPATIAL GRID (Sv)



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

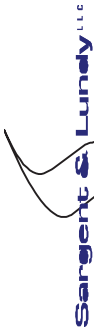
Rev. 2 Date

Safety Related X Non-Safety Related

Page 1.5-368 of 1.5-374

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

L-EDEWBODY 04 95	0-1.6 km	0.0369	1.74E-03	0.00E+00	0.00E+00	0.00E+00	4.56E-02	1.03E-01	1.28E-01	3.14E-
L-EDEWBODY POP. DOSE (Sv)	0-16.1 km									
TOTAL LONG-TERM PATHWAYS DOSE 04 217		1.0000	1.33E+03	1.08E+03	2.85E+03	3.50E+03	5.19E+03	5.81E+03	1.02E+04	1.64E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 05 147		0.9680	5.20E+02	3.37E+02	1.23E+03	1.83E+03	2.32E+03	2.49E+03	3.81E+03	3.81E-
TOTAL INGESTION PATHWAYS DOSE 04 175		1.0000	6.16E+02	4.03E+02	1.34E+03	2.04E+03	3.45E+03	4.17E+03	9.61E+03	1.52E-
LONG-TERM GROUNDSHINE DOSE 05 147		0.9680	5.19E+02	3.35E+02	1.22E+03	1.83E+03	2.32E+03	2.49E+03	3.81E+03	3.81E-
LONG-TERM RESUSPENSION DOSE 04 93		0.9680	6.20E-01	1.51E-01	1.76E+00	2.80E+00	5.36E+00	6.13E+00	8.83E+00	8.66E-
WATER INGESTION DOSE 04 175		0.9945	6.08E+02	3.91E+02	1.34E+03	2.04E+03	3.44E+03	4.17E+03	9.61E+03	1.52E-
POP.-DEPENDENT DECONTAMINATION DOSE 05 202		0.9494	1.87E+02	1.02E+02	4.42E+02	6.77E+02	1.16E+03	1.37E+03	2.38E+03	1.29E-
FARM-DEPENDENT DECONTAMINATION DOSE 05 201		0.9797	8.28E+00	7.48E+00	1.38E+01	1.69E+01	2.34E+01	2.62E+01	4.44E+01	1.33E-
INGESTION OF GRAINS 05 201		0.9983	2.66E-01	2.27E-01	5.08E-01	5.94E-01	7.90E-01	8.69E-01	1.81E+00	1.11E-
INGESTION OF LEAF VEG 05 201		0.9983	8.44E-01	7.34E-01	1.49E+00	1.88E+00	2.50E+00	2.78E+00	5.75E+00	1.11E-
INGESTION OF ROOT CROPS 05 201		0.9983	4.95E-01	4.19E-01	9.35E-01	1.08E+00	1.37E+00	1.52E+00	3.37E+00	1.11E-
INGESTION OF FRUITS 05 201		0.9983	2.52E+00	2.17E+00	4.77E+00	5.67E+00	7.66E+00	8.44E+00	1.72E+01	1.11E-
INGESTION OF LEGUMES 05 201		0.9983	9.93E-01	8.59E-01	1.85E+00	2.22E+00	3.05E+00	3.29E+00	6.79E+00	1.11E-
INGESTION OF BEEF 04 285		0.9983	1.42E+00	1.17E+00	2.63E+00	3.20E+00	4.47E+00	5.11E+00	7.50E+00	5.71E-
INGESTION OF MILK 04 110		0.9983	9.78E-01	8.13E-01	1.79E+00	2.27E+00	3.33E+00	3.74E+00	5.55E+00	8.75E-



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222

Rev.	2	Date
Page		1.5-369 of 1.5-374

Client	PSEG Nuclear Development	Safety Related	<input checked="" type="checkbox"/>	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
		Approved by		Date	

INGESTION OF POULTRY 05 201	0.9983	4.94E-01	4.15E-01	9.32E-01	1.08E+00	1.39E+00	1.54E+00	3.44E+00	1.11E-
INGESTION OF OTHER MEAT CROPS 05 201	0.9983	6.81E-02	5.78E-02	1.21E-01	1.46E-01	2.09E-01	2.26E-01	4.74E-01	1.11E-
L-EDEMBODY POP. DOSE (Sv) TOTAL LONG-TERM PATHWAYS DOSE 06 4	1.0000	8.30E+04	3.95E+04	2.25E+05	2.81E+05	3.27E+05	3.41E+05	5.44E+05	9.51E-
LONG-TERM DIRECT EXPOSURE PATHWAYS 04 59	1.0000	6.81E+04	2.99E+04	2.03E+05	2.32E+05	3.05E+05	3.22E+05	3.84E+05	4.85E-
TOTAL INGESTION PATHWAYS DOSE 04 175	1.0000	1.84E+03	1.33E+03	3.60E+03	4.83E+03	7.15E+03	7.71E+03	1.15E+04	1.52E-
LONG-TERM GROUNDSHINE DOSE 04 59	1.0000	6.79E+04	2.98E+04	2.03E+05	2.29E+05	3.01E+05	3.18E+05	3.83E+05	4.85E-
LONG-TERM RESUSPENSION DOSE 03 143	1.0000	2.34E+02	9.37E+01	7.17E+02	8.50E+02	1.10E+03	1.17E+03	1.35E+03	1.17E-
WATER INGESTION DOSE 04 175	1.0000	1.65E+03	1.14E+03	3.43E+03	4.62E+03	7.06E+03	7.59E+03	1.14E+04	1.52E-



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		Prepared by
Project PSEG ESPA		Reviewed by
Proj. No 12380-001		Approved by
		Date
		Date
		Date
		Page 1.5-373 of 1.5-374

MACCS2 10-JAN-10 18:01:03 VERSION 1.13.1: last revised 1/8/04, K. McFadden PAGE 60

SOURCE TERM 10 OF 10:
Case 9

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL		EMER. RESP. # 1		EMER. RESP. # 2		CHRONC RESULTS	
X	PROB>=X	X	PROB>=X	X	PROB>=X	X	PROB>=X
1.00E-07	1.00E+00	0.00E+00	0.00E+00	1.00E-05	1.00E+00	1.00E-08	3.69E-02
2.00E-07	1.00E+00	0.00E+00	0.00E+00	2.00E-05	1.00E+00	2.00E-08	2.96E-02
3.00E-07	1.00E+00	0.00E+00	0.00E+00	3.00E-05	1.00E+00	3.00E-08	2.96E-02
5.00E-07	1.00E+00	0.00E+00	0.00E+00	5.00E-05	1.00E+00	5.00E-08	2.96E-02
7.00E-07	1.00E+00	0.00E+00	0.00E+00	7.00E-05	1.00E+00	7.00E-08	2.96E-02
1.00E-06	1.00E+00	0.00E+00	0.00E+00	1.00E-04	1.00E+00	1.00E-07	2.96E-02
2.00E-06	1.00E+00	0.00E+00	0.00E+00	2.00E-04	1.00E+00	2.00E-07	2.96E-02
3.00E-06	1.00E+00	0.00E+00	0.00E+00	3.00E-04	1.00E+00	3.00E-07	2.96E-02
5.00E-06	1.00E+00	0.00E+00	0.00E+00	5.00E-04	1.00E+00	5.00E-07	2.96E-02
7.00E-06	1.00E+00	0.00E+00	0.00E+00	7.00E-04	1.00E+00	7.00E-07	2.96E-02
1.00E-05	1.00E+00	0.00E+00	0.00E+00	1.00E-03	1.00E+00	1.00E-06	2.96E-02
2.00E-05	1.00E+00	0.00E+00	0.00E+00	2.00E-03	1.00E+00	2.00E-06	2.96E-02
3.00E-05	1.00E+00	0.00E+00	0.00E+00	3.00E-03	1.00E+00	3.00E-06	2.96E-02
5.00E-05	1.00E+00	0.00E+00	0.00E+00	5.00E-03	1.00E+00	5.00E-06	2.96E-02
7.00E-05	1.00E+00	0.00E+00	0.00E+00	7.00E-03	1.00E+00	7.00E-06	2.96E-02
1.00E-04	1.00E+00	0.00E+00	0.00E+00	1.00E-02	1.00E+00	1.00E-05	2.96E-02
2.00E-04	1.00E+00	0.00E+00	0.00E+00	2.00E-02	1.00E+00	2.00E-05	2.96E-02
3.00E-04	1.00E+00	0.00E+00	0.00E+00	3.00E-02	1.00E+00	3.00E-05	2.96E-02
5.00E-04	1.00E+00	0.00E+00	0.00E+00	5.00E-02	1.00E+00	5.00E-05	2.96E-02
7.00E-04	1.00E+00	0.00E+00	0.00E+00	7.00E-02	1.00E+00	7.00E-05	2.96E-02
1.00E-03	1.00E+00	0.00E+00	0.00E+00	1.00E-01	1.00E+00	1.00E-04	2.96E-02
2.00E-03	1.00E+00	0.00E+00	0.00E+00	2.00E-01	9.96E-01	2.00E-04	2.96E-02



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page 1.5-374 of 1.5-374

Client PSEG Nuclear Development	Safety Related X	Non-Safety Related
Project PSEG ESPA		
Proj. No 12380-001	Equip. No.	
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

3.00E-03	1.00E+00	0.00E+00	0.00E+00	3.00E-01	9.86E-01	3.00E-04	2.96E-02
5.00E-03	1.00E+00	0.00E+00	0.00E+00	5.00E-01	9.63E-01	5.00E-04	2.96E-02
7.00E-03	1.00E+00	0.00E+00	0.00E+00	7.00E-01	9.60E-01	7.00E-04	2.96E-02
1.00E-02	1.00E+00	0.00E+00	0.00E+00	1.00E+00	9.34E-01	1.00E-03	2.96E-02
2.00E-02	9.93E-01	0.00E+00	0.00E+00	2.00E+00	9.07E-01	2.00E-03	2.96E-02
3.00E-02	9.92E-01	0.00E+00	0.00E+00	3.00E+00	9.06E-01	3.00E-03	2.96E-02
5.00E-02	9.63E-01	0.00E+00	0.00E+00	5.00E+00	8.74E-01	5.00E-03	2.96E-02
7.00E-02	9.30E-01	0.00E+00	0.00E+00	7.00E+00	8.56E-01	7.00E-03	2.96E-02
1.00E-01	9.15E-01	0.00E+00	0.00E+00	1.00E+01	7.38E-01	1.00E-02	2.93E-02
2.00E-01	8.74E-01	0.00E+00	0.00E+00	2.00E+01	2.98E-01	2.00E-02	2.93E-02
3.00E-01	8.67E-01	0.00E+00	0.00E+00	3.00E+01	9.86E-02	3.00E-02	2.93E-02
5.00E-01	7.38E-01	0.00E+00	0.00E+00	4.56E+01	2.85E-04	5.00E-02	7.88E-03
7.00E-01	5.51E-01	0.00E+00	0.00E+00	N.D.	N.D.	7.00E-02	7.88E-03
1.00E+00	2.98E-01	0.00E+00	0.00E+00	N.D.	N.D.	1.00E-01	7.42E-03
2.00E+00	2.31E-03	0.00E+00	0.00E+00	N.D.	N.D.	1.28E-01	3.14E-04
2.28E+00	2.85E-04	0.00E+00	0.00E+00	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	0.00E+00	0.00E+00	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	0.00E+00	0.00E+00	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	0.00E+00	0.00E+00	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	0.00E+00	0.00E+00	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	0.00E+00	0.00E+00	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	0.00E+00	0.00E+00	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	0.00E+00	0.00E+00	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	0.00E+00	0.00E+00	N.D.	N.D.	N.D.	N.D.

Successful completion of MACCS2 was achieved!
 This job required a total of 25.328 CPU seconds

Input processing required 0.219 CPU seconds
 Simulation required 23.891 CPU seconds
 Output processing required 1.219 CPU seconds



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-1	of J-243

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

ATTACHMENT J
Hope Creek ER MACCS2 Input Files



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	J-2	of	J-243

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

From: Grant Teagarden [mailto:gateagarden@erineng.com]
 Sent: Tuesday, September 15, 2009 2:34 PM
 To: Mallon, James
 Subject: RE: MACCS2 and ESP Work

Jamie,

Attached are MACCS2 input files used for the HC License Renewal effort.

HCSit46 is the site data file, with population numbers and such. It is for the year 2046.
 (For Salem we did year 2040).
 HcAtm has the release information, probably not too interesting for you.
 SHcEar models the early phase of the accident and has the evacuation information.
 SHcChr models the long term phase of the accident, probably not too interesting for you.
 SHCMet04 is the meteorological file for 2004, the base case year for the license renewal. Probably not needed by you.

For Clinton, ESP, Harris COL, and Levy County COL we used 2060 population data (basically end of 40 year license).

I remember having some discussions on the end date selections. NUREG-1555 (Environmental Standard Review Plan) for Section 7.2 (Severe Accidents) specifies 5 years from the time of the licensing action under consideration. But I think I've only seen one plant use this early time of like 2020, (it may have been Vogtle – not sure). Typically, using end of life just provides some conservatism, which is not a big deal for the new plant designs since their accident frequencies (e.g., CDF) are pretty low.

Let me know if I can be of further assistance.

Grant

 Grant Teagarden
 Manager, Consequence Analysis
 ERIN Engineering and Research, Inc.
 an SKF Group Company
 2105 S. Bascom Avenue, Suite 350
 Campbell, CA 95008
 (408) 559-4514
 (408) 559-4597 fax
 gateagarden@erineng.com
 www.erineng.com

The information contained in this e-mail, including any attachment(s), is intended solely for use by the named addressee(s). If you are not the intended recipient, or a person designated as responsible for delivering such messages to the intended recipient, you are



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-3	of J-243

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

not authorized to disclose, copy, distribute or retain this message, in whole or in part, without written authorization from PSEG. This e-mail may contain proprietary, confidential or privileged information. If you have received this message in error, please notify the sender immediately. This notice is included in all e-mail messages leaving PSEG. Thank you for your cooperation.



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	J-4	of	J-243

Client	PSEG Nuclear Development		Prepared by		Date	
Project	PSEG ESPA		Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by		Date

MACCS2 SITE file for Hope Creek SAMA (HcSit46.inp, Year 2046 Pop.)
 Originator: G. Teagarden (7/14/2008) Verified: M. Saunders (7/14/2008)

- 10 SPATIAL INTERVALS
- 16 WIND DIRECTIONS
- 7 CROP CATEGORIES
- 4 WATER PATHWAY ISOTOPES
- 2 WATERSHEDS
- 63 ECONOMIC REGIONS

SPATIAL DISTANCES		KILOMETERS						
1.6093	3.2187	4.8280	6.4374	8.0467	16.0935	32.1869	48.2804	
64.3739	80.4674							

POPULATION		KILOMETERS						
0.	0.	0.	0.	0.	1830.	246483.	205299.	
162261.	203948.							
0.	0.	0.	0.	105.	15854.	26708.	169874.	
969326.	1326997.							
0.	0.	0.	0.	176.	4512.	16670.	98321.	
418531.	531046.							
0.	0.	0.	187.	571.	3500.	8618.	47490.	
80249.	45510.							
0.	0.	0.	0.	220.	1734.	65843.	108963.	
22328.	51820.							
0.	0.	0.	0.	0.	1674.	17688.	22482.	
9994.	28862.							
0.	0.	0.	0.	0.	0.	141.	835.	
0.	48631.							
0.	0.	0.	0.	0.	129.	108.	1845.	
1413.	7822.							
0.	0.	0.	90.	0.	1193.	27990.	88978.	
27767.	18930.							
0.	0.	0.	0.	0.	1299.	32553.	16178.	
9882.	17231.							
0.	0.	0.	27.	0.	4706.	7140.	7738.	
6343.	12701.							
0.	0.	15.	0.	904.	5183.	7138.	5135.	
11206.	36303.							
0.	0.	0.	23.	566.	17065.	9607.	5916.	
55881.	212030.							
0.	0.	0.	304.	2138.	6172.	42406.	36834.	
30575.	28271.							
0.	0.	75.	0.	940.	5686.	193335.	42694.	
28418.	52573.							
0.	0.	145.	160.	158.	44577.	238574.	113728.	
76381.	66009.							

LAND FRACTION									
1.00	0.95	0.30	0.25	0.25	0.40	0.75	0.92	0.99	1.00
1.00	1.00	0.93	0.97	1.00	0.95	0.95	0.85	0.95	0.99
1.00	1.00	0.99	0.96	0.95	0.99	0.99	0.99	0.98	0.98
1.00	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.95	0.95	0.97	1.00	1.00	1.00	0.99	0.98	1.00	0.99
0.03	0.25	0.50	0.65	0.75	1.00	0.98	0.99	0.92	0.95



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	J-5	of	J-243

Client	PSEG Nuclear Development		Prepared by		Date	
Project	PSEG ESPA		Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by		Date

0.01 0.00 0.00 0.00 0.00 0.33 0.35 0.30 0.03 0.40
 0.01 0.00 0.00 0.00 0.00 0.03 0.50 0.25 0.35 0.40
 0.01 0.00 0.03 0.45 0.60 0.97 0.99 0.99 0.99 0.99
 0.01 0.00 0.45 0.97 0.92 1.00 1.00 1.00 1.00 0.99
 0.01 0.00 0.50 0.92 0.95 0.98 1.00 0.98 0.97 0.75
 0.01 0.00 0.45 0.92 0.92 0.99 0.97 0.93 0.75 0.25
 0.01 0.00 0.15 0.92 0.92 0.99 0.93 0.40 0.80 0.90
 0.01 0.00 0.00 0.70 0.97 0.99 0.93 0.90 0.90 0.90
 0.15 0.00 0.01 0.25 0.85 0.99 1.00 1.00 1.00 0.99
 0.95 0.30 0.01 0.10 0.35 0.75 0.90 1.00 1.00 0.99

REGION INDEX

1 2 2 2 2 2 2 4 5 6
 1 2 2 2 2 2 2 7 8 9
 1 2 2 2 2 210111213
 1 2 2 2 21415161718
 1 2 2 2 21920202122
 1 2 2 2 22320202422
 1 2 3 3 32626262627
 1 3 3 3 32826262930
 1 3 3 3 33132333435
 1 3 3 3 3 336373839
 1 3 3 3 3 340414243
 1 3 3 3 3 344454647
 1 3 3 3 3 348495051
 1 2 3 3 3 352535455
 1 2 2 3 3 3 3565758
 1 2 2 2 35960616263

WATERSHED INDEX

1 1 2 2 2 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1
 2 2 1 1 1 1 1 1 1 1
 2 2 2 2 2 2 2 2 2 1
 2 2 2 2 2 2 1 2 1 1
 2 2 2 2 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1 1
 2 2 2 1 1 1 1 1 1 1
 2 2 2 2 1 1 1 1 1 1
 1 2 2 2 2 1 1 1 1 1

CROP SEASON AND SHARE

1 PASTURE 90. 270. 0.4100
 2 STORED FORAGE 150. 240. 0.1300
 3 GRAINS 150. 240. 0.2100
 4 GRN LEAFY VEGETABLES 150. 240. 0.0020
 5 OTHER FOOD CROPS 150. 240. 0.0040
 6 LEGUMES AND SEEDS 150. 240. 0.1500



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	J-6	of	J-243

Client	PSEG Nuclear Development		Prepared by		Date	
Project	PSEG ESPA		Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by		Date

7 ROOTS AND TUBERS 150. 240. 0.0030
 WATERSHED DEFINITION -- INITIAL AND ANNUAL WASHOFF AND INGESTION FACTORS

1 Sr-89	5.00E-06	0.0
2 Sr-90	5.00E-06	0.0
3 Cs-134	5.00E-06	0.0
4 Cs-137	5.00E-06	0.0

REGIONAL ECONOMIC DATA

01 EXCLUSION	0.45	0.090	1861.3	13673.7	235830.7
02 SALEM	0.45	0.090	1861.3	13673.7	235830.7
03 N_CASTLE	0.26	0.079	0948.0	19736.6	303569.3
04 N-20	0.20	0.037	2157.6	20444.1	277602.8
05 N-30	0.05	0.017	1958.8	18162.9	307006.4
06 N-40	0.13	0.100	1964.7	26183.0	351488.1
07 NNE-20	0.25	0.036	3144.9	26457.8	247747.7
08 NNE-30	0.12	0.013	2768.2	26733.3	250181.2
09 NNE-40	0.11	0.026	1981.1	22799.4	265861.5
10 NE-10	0.44	0.086	1981.3	13740.5	233949.1
11 NE-20	0.32	0.056	2672.0	21747.8	243357.2
12 NE-30	0.16	0.016	3403.4	29136.5	253768.9
13 NE-40	0.15	0.027	3187.8	23824.1	271205.3
14 ENE-5	0.43	0.083	2101.4	13807.3	232067.4
15 ENE-10	0.25	0.020	4021.7	14876.9	201961.4
16 ENE-20	0.29	0.035	3504.3	16494.4	215132.8
17 ENE-30	0.13	0.007	5595.6	19080.4	237336.0
18 ENE-40	0.09	0.003	6164.9	18356.6	245615.2
19 E-5	0.30	0.036	3541.6	14609.5	209487.9
20 CUMBERLND	0.23	0.012	4261.8	15010.6	198198.1
21 E-30	0.17	0.007	4389.2	16606.7	223788.3
22 E-40	0.07	0.000	4218.1	19155.6	265936.7
23 ESE-5	0.32	0.044	3301.6	14475.8	213251.2
24 ESE-30	0.19	0.009	3888.5	16201.6	218896.0
25 CAPE_MAY	0.06	0.000	2768.8	19774.4	280989.8
26 KENT_DE	0.49	0.088	1714.9	10388.2	200707.0
27 SE-40	0.43	0.014	3906.0	13360.2	224540.9
28 SES-5	0.38	0.084	1331.5	15062.4	252138.1
29 SES-30	0.49	0.078	2062.6	10727.1	203341.3
30 SES-40	0.47	0.023	3800.6	12421.5	216512.7
31 S-5	0.27	0.079	0986.4	19269.2	298426.2
32 S-10	0.46	0.087	1599.9	11790.5	216136.3
33 S-20	0.50	0.082	1767.9	10159.8	199201.7
34 S-30	0.52	0.063	1926.8	09474.5	194685.8
35 S-40	0.53	0.036	2423.0	09700.5	203968.5
36 SWS-10	0.40	0.103	1231.4	15426.4	272836.0
37 SWS-20	0.63	0.085	1270.4	09569.8	270201.8
38 SWS-30	0.63	0.064	1347.3	09240.4	264682.3
39 SWS-40	0.63	0.064	1166.0	10030.4	290197.2
40 SW-10	0.43	0.125	1256.5	15562.8	286509.2
41 SW-20	0.65	0.171	1368.6	09985.2	279459.4
42 SW-30	0.66	0.167	1334.9	09820.8	280989.8
43 SW-40	0.64	0.187	1402.0	10172.6	279384.1
44 WSW-10	0.32	0.089	1760.8	18256.9	257908.5



Calcs. For ENVIRONMENTAL CONSEQUENCE			
ANALYSIS FOR PSEG ESPA			
	Safety Related	X	Non-Safety Related

Calc No.	2009-11222		
Rev.	2	Date	
Page	J-7	of	J-243

Client	PSEG Nuclear Development		Prepared by		Date	
Project	PSEG ESPA		Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by		Date

45 WSW-20	0.39	0.123	1997.0	16311.0	242353.7
46 WSW-30	0.33	0.313	0853.2	14611.5	278480.9
47 WSW-40	0.23	0.201	1473.6	17532.4	294788.4
48 W-10	0.31	0.088	1635.7	18484.6	264933.2
49 CECIL	0.35	0.095	2198.4	17460.1	233321.9
50 W-30	0.31	0.245	1284.0	15950.9	262675.3
51 W-40	0.33	0.298	1003.5	15264.2	269449.1
52 WNW-10	0.28	0.083	1260.6	19167.5	286007.4
53 WNW-20	0.35	0.104	3199.1	21168.5	276223.0
54 WNW-30	0.45	0.182	4643.1	25326.0	304823.7
55 WNW-40	0.66	0.316	4437.0	22199.0	233321.9
56 NW-20	0.32	0.107	3724.6	25741.9	345818.1
57 NW-30	0.36	0.132	5511.6	29619.0	372035.5
58 NW-40	0.52	0.230	5161.0	26449.5	304823.7
59 NWN-5	0.41	0.088	1678.7	14886.2	249378.4
60 NWN-10	0.31	0.082	1176.3	18220.9	286634.7
61 NWN-20	0.23	0.072	2025.2	21198.8	320127.6
62 NWN-30	0.30	0.107	4966.1	27892.5	366917.4
63 NWN-40	0.33	0.128	5161.7	29958.4	338693.0

END

*23456789012345678901234567890123456789012345678901234567890 - alignment

*

* SPATIAL DISTANCES

*
*-----

* REF/BASIS:

*
* MATCHES THE ATMOS FILE - Miles of 1,2,3,4,5,10,20,30,40,50

*

* POPULATION

*
*-----

* REF/BASIS:

*
* CALCULATION SLHC-POP.XLS

* YEAR 2046 POPULATION PROJECTIONS

* 0 - 10 Mile - RESIDENT & TRANSIENT (RECOMMENDED IN NEI 05-01)

* 10 - 50 Mile - RESIDENT ONLY (TO PREVENT DOUBLE COUNTING AND EXCESSIVE
* CONSERVATISM ON INTERDICTION COSTS)

* HOPE CREEK AND SALEM UNITS ARE ON THE SAME SITE. SECPOP2000 RESULTS

* FOR YEAR 2000 SHOW POPULATION FOR HOPE CREEK IS SLIGHTLY LARGER THAN
* FOR SALEM (BY 0.5%) SO SECPOP HOPE CREEK IS USED AS INITIAL BASIS (PRIOR TO
* PROJECTION.)

*
*



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-8	of J-243

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

*
* LAND FRACTION

*-----
*
* REF/BASIS:
*
* VISUALLY ESTIMATED USING A MAP OF THE REGION
* OVERLAID WITH A GRID.
*

* REGION INDEX

*-----
*
* REF/BASIS:
*
* ASSIGNMENT IS VISUALLY ASSIGNED USING A MAP OF THE REGION
* OVERLAID WITH A GRID.
*

* CROP SEASON AND SHARE

*-----
*
* REF/BASIS:
*
* WHEN THE "NEW" FOODPATH MODEL COMIDA2 IS USED THESE INPUTS ARE NOT USED.
* CROP PRODUCTION MUST BE INPUT INTO THE COMIDA2 INPUT FILE.
*
* Salem & Hope Creek MACCS2 ANALYSIS UTILIZES THE COMIDA2 DEFAULT VALUES
* EXPERIENCE SHOWS LITTLE BENEFIT FOR THE EFFORT REQUIRED FOR SITE SPECIFIC ANALYSIS
* SENSITIVITY CASE MAY BE PERFORMED WITH SITE SPECIFIC DATA BY THE FOLLOWING APPROACH
*
* CROP SEASON DATES CAN BE BASED ON THE USDA "USUAL PLANTING AND HARVESTING
* DATES FOR U.S. FIELD CROPS" (LATEST EDITION) FOR THE DESIRED STATE
*
* CROP FRACTIONS CAN BE BASED ON CENSUS OF AGRICULTURE FOR THE COUNTIES WITHIN
* 50 MILES. U.S. DEPT OF AGRICULTURE, WITH THE FOLLOWING CONSIDERATIONS:
*
* PASTURE - ESTIMATED FROM DIFFERENCE BETWEEN TOTAL FARMLAND AND TOTAL CROPLAND
* STORED FORAGE - HAY, ALFALFA, ETC
* GRAINS - CORN, WHEAT, BARLEY, OATS
* GRN LEAFY VEGETABLES - MINIMAL
* OTHER FOOD CROPS - ORCHARDS - MINIMAL
* LEGUMES AND SEEDS - BEANS AND SEEDS
* ROOTS AND TUBERS - POTATOES, CARROTS, ETC
*



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

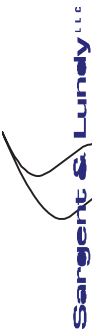
Calc No.	2009-11222	
Rev.	2	Date
Page	J-9	of J-243

Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

* TOTAL FRACTION NEED NOT EQUAL 1.0 SINCE SOME LAND LIES FALLOW EACH YEAR
 *

 *
 * WATERSHED INDEX
 *
 *-----
 *
 * NUREG/CR-4551 (VOL.2, REV.1, PART 7) PAGE 2-37 NOTES THAT LAKE SHOULD ONLY
 * BE DEFINED FOR VERY LARGE BODIES OF WATER (E.G. LAKE MICHIGAN). THERE ARE NO
 * LARGE LAKES AROUND THE SALEM & HOPE CREEK SITE, SO THE RIVER DESIGNATION
 * IS USED FOR AREAS WITH SUBSTANTIAL LAND.
 *
 * SECTION 2.4.1.2 (HYDROSPHERE) OF THE HOPE CREEK UFSAR INDICATES THAT
 * TIDAL FLOWS FROM THE OCEAN DOMINATE OVER FRESH WATER RIVER DISCHARGES
 * NEAR THE SITE (TIDAL FLOWS EXCEED FRESH WATER FLOWS 18 MILES UPSTREAM
 * OF THE SITE). DUE TO THE SALINITY OF THE WATER NEAR THE SITE,
 * THE OCEAN DESIGNATION IS USED FOR PORTIONS OF THE DELAWARE RIVER
 * NEAR THE SITE. ASSIGNMENT IS VISUALLY ASSIGNED USING A MAP OF THE REGION
 * OVERLAID WITH A GRID.
 *
 *-----
 *
 * WATERSHED DEFINITION
 *
 *-----
 *
 * REF/BASIS:
 *
 * THE RIVER INGESTION VALUES USED ARE TAKEN FROM NUREG/CR-4551, VOL. 2, REV. 1,
 * PART 7, SECTION 2.8, TABLE 2.16. ZERO VALUES ARE UTILIZED FOR OCEAN REGIONS
 * SINCE OCEAN WATER IS NOT USED FOR DRINKING WATER.
 *
 *-----
 *
 * REGIONAL ECONOMIC DATA
 *
 *-----
 *
 * REF/BASIS:
 *
 * DEVELOPED BASED ON SECPOP2000 METHODOLOGY EQUATIONS (BUT NOT THE SECPOP
 * SOFTWARE)
 * USES THE MOST CURRENT DATA FROM THE 2002 CENSUS OF AGRICULTURE, BEA, BLS
 * SEE CALC SLHC-ECONSITE.XLS
 *
 *-----
 *
 *-----



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	J-10 of J-243
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* FILE NAME: HCATM.INP

* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT

* RIATNAM1001 'ATMOS INPUT FOR HOPE CREEK SAMA MODEL, 3 PLUMES'

* ORIGINATOR: GRANT TEAGARDEN (9/3/2008)

* VERIFIED: MIKE SAUNDERS (9/3/2008)

* GEOMETRY DATA BLOCK

* NUMBER OF RADIAL SPATIAL ELEMENTS

GENUMRAD001 10

* SPATIAL ENDPOINT DISTANCES IN MILES (MATCHES SITE FILE)

END001	1	2	3	4	5
END002	10	20	30	40	50

* SPATIAL ENDPOINT DISTANCES IN KILOMETERS

GESPAEND001	1.61	3.22	4.83	6.44	8.05
GESPAEND002	16.1	32.2	48.3	64.4	80.5

* NUCLIDE DATA BLOCK

* Number of pseudo-stable nuclides (used to truncate the decay chains)
 * (User's Guide p.5-7, SAMPLE PROBLEM A)
 ISNUMSTB001 27

* List of pseudo-stable nuclides (USER'S GUIDE SAMPLE PROBLEM A)

*



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222
Rev. 2 Date
Page J-11 of J-243

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

ISNAMSTB001	I-129	(daughter of Te-129 and Te-129m)
ISNAMSTB002	Xe-131m	(daughter of I-131)
ISNAMSTB003	Xe-133m	(daughter of I-133)
ISNAMSTB004	Xe-135m	(daughter of I-135)
ISNAMSTB005	Cs-135	(daughter of Xe-135 and Xe-135m)
ISNAMSTB006	Sm-147	(daughter of Pm-147)
ISNAMSTB007	U-234	(daughter of Pu-238)
ISNAMSTB008	U-235	(daughter of Pu-239)
ISNAMSTB009	U-236	(daughter of Pu-240)
ISNAMSTB010	U-237	(daughter of Pu-241)
ISNAMSTB011	Np-237	(daughter of Am-241)
ISNAMSTB012	Rb-87	(daughter of Kr-87)
ISNAMSTB013	Ba-137m	(daughter of Cs-137)
ISNAMSTB014	Rb-88	(daughter of Kr-88)
ISNAMSTB015	Y-91m	(daughter of Sr-91)
ISNAMSTB016	Zr-93	(daughter of Y-93)
ISNAMSTB017	Nb-93m	(daughter of Zr-93)
ISNAMSTB018	Nb-95m	(daughter of Zr-95)
ISNAMSTB019	Nb-97	(daughter of Zr-97 and Nb-97m)
ISNAMSTB020	Nb-97m	(daughter of Zr-97)
ISNAMSTB021	Tc-99	(daughter of Mo-99)
ISNAMSTB022	Rh-103m	(daughter of Ru-103)
ISNAMSTB023	Rh-106	(daughter of Ru-106)
ISNAMSTB024	Te-131	(daughter of Te-131m)
ISNAMSTB025	Pr-144	(daughter of Ce-144 and Pr-144m)
ISNAMSTB026	Pr-144m	(daughter of Ce-144)
ISNAMSTB027	Pm-147	(daughter of Nd-147)

* Number of radioactive nuclides to be considered (USER'S GUIDE SAMPLE PROBLEM A)

* ISNUMISO001 60

* NUMBER OF NUCLIDE GROUPS (USER'S GUIDE SAMPLE PROBLEM A)

* ISMAXGRP001 9



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	J-12 of J-243

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.

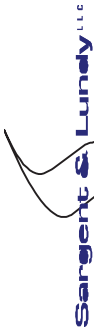
Prepared by	Date
Reviewed by	Date
Approved by	Date

* GROUP 1 - NOBLE GAS
 * GROUP 2 - IODINE
 * GROUP 3 - CESIUM, RUBIDIUM
 * GROUP 4 - TELLURIUM
 * GROUP 5 - STRONTIUM
 * GROUP 6 - MOLYBDENUM, COBALT, RUTHENIUM, TECHNICIUM
 * GROUP 7 - LANTHIUM, YTTRIUM, NEODYMIUM, PROMETHIUM, AMERICIUM, CURIUM
 * GROUP 8 - CERIUM, ACTINIDES (PLUTONIUM, NEPTUNIUM)
 * GROUP 9 - BARIUM

* WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP
 * ALL NUCLIDE GROUPS EXCEPT NOBLE GAS ARE ASSUMED SUBJECT
 * TO BOTH WET AND DRY DEPOSITION. (USER'S GUIDE SAMPLE PROBLEM A)

ISDEPFLA001	ISDEPFLA002	ISDEPFLA003	ISDEPFLA004	ISDEPFLA005	ISDEPFLA006	ISDEPFLA007	ISDEPFLA008	ISDEPFLA009	WETDEP	DRYDEP
.FALSE.	.TRUE.	.TRUE.	.TRUE.	.TRUE.	.TRUE.	.TRUE.	.TRUE.	.TRUE.	.FALSE.	

* NUCLIDE GROUP DATA FOR 9 NUCLIDE GROUPS
 * (USER'S GUIDE SAMPLE PROBLEM A)
 * NO PARENT OR HALF-LIFE
 * NUCNAM IGROUP
 ISOTFGRFP001 Co-58 6
 ISOTFGRFP002 Co-60 6



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page J-13 of J-243

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related	
ISOTPGRP003				Kr-85
ISOTPGRP004				Kr-85m
ISOTPGRP005				Kr-87
ISOTPGRP006				Kr-88
ISOTPGRP007				Rb-86
ISOTPGRP008				Sr-89
ISOTPGRP009				Sr-90
ISOTPGRP010				Sr-91
ISOTPGRP011				Sr-92
ISOTPGRP012				Y-90
ISOTPGRP013				Y-91
ISOTPGRP014				Y-92
ISOTPGRP015				Y-93
ISOTPGRP016				Zr-95
ISOTPGRP017				Zr-97
ISOTPGRP018				Nb-95
ISOTPGRP019				Mo-99
ISOTPGRP020				Tc-99m
ISOTPGRP021				Ru-103
ISOTPGRP022				Ru-105
ISOTPGRP023				Ru-106
ISOTPGRP024				Rh-105
ISOTPGRP025				Sb-127
ISOTPGRP026				Sb-129
ISOTPGRP027				Te-127
ISOTPGRP028				Te-127m
ISOTPGRP029				Te-129
ISOTPGRP030				Te-129m
ISOTPGRP031				Te-131m
ISOTPGRP032				Te-132
ISOTPGRP033				I-131
ISOTPGRP034				I-132
ISOTPGRP035				I-133
ISOTPGRP036				I-134
ISOTPGRP037				I-135



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

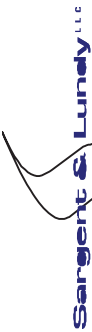
Calc No. 2009-11222
Rev. 2 Date
Page J-14 of J-243

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

	Safety Related	X	Non-Safety Related	
ISOTPGRP038	Xe-133	1		
ISOTPGRP039	Xe-135	1		
ISOTPGRP040	Cs-134	3		
ISOTPGRP041	Cs-136	3		
ISOTPGRP042	Cs-137	3		
ISOTPGRP043	Ba-139	9		
ISOTPGRP044	Ba-140	9		
ISOTPGRP045	La-140	7		
ISOTPGRP046	La-141	7		
ISOTPGRP047	La-142	7		
ISOTPGRP048	Ce-141	8		
ISOTPGRP049	Ce-143	8		
ISOTPGRP050	Ce-144	8		
ISOTPGRP051	Pr-143	7		
ISOTPGRP052	Nd-147	7		
ISOTPGRP053	Np-239	8		
ISOTPGRP054	Pu-238	8		
ISOTPGRP055	Pu-239	8		
ISOTPGRP056	Pu-240	8		
ISOTPGRP057	Pu-241	8		
ISOTPGRP058	Am-241	7		
ISOTPGRP059	Cm-242	7		
ISOTPGRP060	Cm-244	7		

 * WET DEPOSITION DATA BLOCK

 * WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR
 *
 WDCWASH1001 9.5E-5 (NUREG/CR-4551 PART 7, TABLE 2.9)
 *
 * WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR
 *
 WDCWASH2001 0.8 (NUREG/CR-4551 PART 7, TABLE 2.9)
 *
 * REF/BASIS:



Calcs. For ENVIRONMENTAL CONSEQUENCE			Calc No.	2009-11222	
ANALYSIS FOR PSEG ESPA			Rev.	2	Date
Safety Related	X	Non-Safety Related	Page	J-15	of J-243
Client		PSEG Nuclear Development	Prepared by	Date	
Project		PSEG ESPA	Reviewed by	Date	
Proj. No		12380-001	Approved by	Date	
Equip. No.					

* * * * *

* * * * * CONSISTENT WITH NUREG/CR-4551 & SAMPLE PROBLEM A,

* * * * * JON HELTON AFTER JONES, 1986

* * * * *

* * * * * BRENK, H.D., AND VOGT, K.J., "THE CALCULATION OF WET DEPOSITION FROM

* * * * * RADIOACTIVE PLUMES", NUCLEAR SAFETY, VOL. 22, NO. 3, 1981.

* * * * *

* * * * * JONES, J.A., "THE UNCERTAINTY IN DISPERSION ESTIMATES OBTAINED FROM

* * * * * THE WORKING GROUP MODELS", NRPB-R199, NRPB, UNITED KINGDOM, 1986.

* * * * *

* * * * * DRY DEPOSITION DATA BLOCK

* * * * *

* * * * * NUMBER OF PARTICLE SIZE GROUPS

* * * * *

* * * * * DDNPSGRP001 1

* * * * *

* * * * * DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)

* * * * *

* * * * * DDVDEPOS001 0.01 (VALUE SELECTED BY S. ACHARYA, NRC)

* * * * *

* * * * * REF/BASIS:

* * * * *

* * * * * USER'S GUIDE, SAMPLE PROBLEM A, & NUREG/CR-4551

* * * * *

* * * * * DISPERSION PARAMETER DATA BLOCK

* * * * *

* * * * *

* * * * * # OF DISTANCES IN PLUME-SIZE TABLES--WHICH CAN BE USED AS AN ALTERNATIVE TO

* * * * * THE POWER-LAW MODEL: (TO UTILIZE THE POWER-LAW MODEL, SET NUM_DIST TO ZERO

* * * * * OR DELETE THE FOLLOWING DATA CARD)

* * * * *

* * * * * NUM_DIST001 0

* * * * *

* * * * * POWER-LAW FUNCTION IS OF FORM: SIGMA = A * X ** B

* * * * *



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	J-16 of J-243
Non-Safety Related		Prepared by	Date
Client PSEG Nuclear Development		Reviewed by	Date
Project PSEG ESPA		Approved by	Date
Proj. No 12380-001		Equip. No.	

* Tadmor and Gur Parameterization for Distance Range 0.5 to 5.0 km
 * (NUREG/CR-4551 PART 7 TABLE 2.4)

	A	B	C	D	E	F
DPCYSIGA001	0.3658	0.2751	0.2089	0.1474	0.1046	0.0722
DPCYSIGB001	0.9031	0.9031	0.9031	0.9031	0.9031	0.9031
DPCZSIGA001	2.5E-4	1.9E-3	0.2	0.3	0.4	0.2
DPCZSIGB001	2.125	1.6021	0.8543	0.6532	0.6021	0.6020

* LINEAR SCALING FACTOR FOR SIGMA-Y FUNCTION, NORMALLY 1
 DPYSCALE001 1.

* LINEAR SCALING FACTOR FOR SIGMA-Z FUNCTION,
 NORMALLY USED FOR SURFACE ROUGHNESS LENGTH CORRECTION.
 (Z1 / Z0) ** 0.2, FROM CRAC2 WE HAVE (10 CM / 3 CM) ** 0.2 = 1.27

DPZSCALE001 1.27 (VALUE INTENDED TO BE USED WITH TADMOR AND GUR PARAMATERS

* REF/BASIS:

* MACCS COMPUTES SIGMA-Y AND SIGMA-Z AS FOLLOWS:

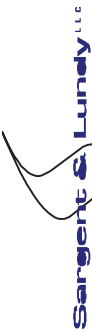
* SIGMA-Y = A * X ** B

* SIGMA-Z = C * X ** D

* THE SIGMA-Y COEFFICIENTS (A AND B) AND SIGMA-Z COEFFICIENTS (C AND D)
 * ARE TAKEN FROM NUREG-4551, VOL. 2, REV. 1, PART 7, SECTION 2.4.
 * SAMPLE PROBLEM A USES EMBEDDED DATA TABLES.

* NO SIGMA-Y SCALING IS REQUIRED/USED.

* SIGMA-Z SCALING VALUE CONSISTENT WITH SAMPLE PROBLEM A & NUREG/CR-4551



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page J-17 of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

* PLUME MEANDER EXPANSION FACTOR DATA BLOCK

* TIME BASE FOR EXPANSION FACTOR (SECONDS)

PMTIMBAS001 600. (10 MINUTES)

* BREAK POINT FOR FORMULA CHANGE (SECONDS)

PMBRKPNT001 3600. (1 HOUR)

* EXPONENTIAL EXPANSION FACTOR NUMBER 1

PMXPFAC1001 0.2

* EXPONENTIAL EXPANSION FACTOR NUMBER 2

PMXPFAC2001 0.25

* REF/BASIS:

* ABOVE VALUES CONSISTENT WITH SAMPLE PROBLEM A & NUREG/CR-4551.

* PLUME RISE DATA BLOCK

* THE FOLLOWING SCALING FACTORS COULD BE USED TO MODIFY THE MACCS METHOD OF PERFORMING PLUME RISE CALCS.

* SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A BOUYANT PLUME (USED BY FUNCTION CAUGHT)

PRSCLCRW001 1.

*



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
 * (USED BY FUNCTION PLMRIS)
 *
 PRSCLADP001 1.
 *
 * SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
 * (USED BY FUNCTION PLMRIS)
 *
 PRSCLEFP001 1.
 *
 *** REF/BASIS:
 *
 * THE SCALING FACTORS CAN BE USED TO MODIFY THE RESULTS OF THE HARD-WIRED
 * PLUME RISE CALCULATIONS PERFORMED BY MACCS. AT THIS TIME, THE HARD-WIRED
 * MACCS PLUME RISE MODEL WILL BE USED, SO ALL THE SCALING FACTORS ARE SET
 * TO 1.0.
 *
 * CONSISTENT WITH SAMPLE PROBLEM A & NUREG/CR-4551.
 *

 * WAKE EFFECTS DATA BLOCK

 *
 * DETERMINATION OF WAKE EFFECTS HAS BEEN REVISED FOR MACCS2. THE WIDTH VARIABLE
 * IS NO LONGER INCLUDED. ADDITIONALLY, VALUES MUST BE INCLUDED FOR EACH PLUME.
 *
 * Hope Creek Containment / Rx Building
 * Width = ~52m or ~170ft (estimated from dwg A-0534)
 * Height above grade = ~61m or ~200' (estimated from dwg A-0402-0)
 *
 * Initial value of sigma-y for each plume
 *
 SIGYINIT001 12.1 12.1 *(initial sigma-y = W/4.3 = 52/4.3 (User's Guide p. 5-22))
 *
 * Initial value of sigma-z for each plume



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2 Date
Safety Related	X	Page	J-19 of J-243
Non-Safety Related		Prepared by	Date
Client PSEG Nuclear Development		Reviewed by	Date
Project PSEG ESPA		Approved by	Date
Proj. No 12380-001		Equip. No.	

* SIGZINIT001 28.4 28.4 28.4 *(initial sigma-z = H/2.15= 61/2.15 (User's Guide p.5-22))

* Building height (meters)

* WEBUILDH001 61. 61. 61. *(Height of Cont/RB in meters)

* RELEASE DATA BLOCK

 * PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP
 * YOU MUST SPECIFY A COLUMN OF DATA FOR EACH OF THE PARTICLE SIZE GROUPS
 * (USER'S GUIDE SAMPLE PROBLEM A)

- RDPDIST001 1.
- RDPDIST002 1.
- RDPDIST003 1.
- RDPDIST004 1.
- RDPDIST005 1.
- RDPDIST006 1.
- RDPDIST007 1.
- RDPDIST008 1.
- RDPDIST009 1.

* HOPE CREEK CORE INVENTORY BASED ON HC CALC H-1-ZZ-MDC-1880 REV 2
 * TABLE 1D, AUGUST 2006, PERFORMED FOR AST AND EPU.

* SEE ERIN CALC HC-CI.XLS FOR CONVERSION TO BQ

* CORE INVENTORY BASED ON 3917 MWTH, WHICH INCORPORATES
 * 15% EPU AND 2% FOR INSTRUMENT UNCERTAINTY, ABOVE
 * PRE-EPU LICENSE VALUE OF 3339 MWTH.

* NUCNAM CORINV (Bq)



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page J-20 of J-243

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

*	RDCORINV001	Co-58	2.22E+16
	RDCORINV002	Co-60	2.65E+16
	RDCORINV003	Kr-85	4.78E+16
	RDCORINV004	Kr-85m	1.07E+18
	RDCORINV005	Kr-87	2.06E+18
	RDCORINV006	Kr-88	2.90E+18
	RDCORINV007	Rb-86	9.20E+15
	RDCORINV008	Sr-89	3.90E+18
	RDCORINV009	Sr-90	3.83E+17
	RDCORINV010	Sr-91	7.68E+18
	RDCORINV011	Sr-92	5.23E+18
	RDCORINV012	Y-90	4.07E+17
	RDCORINV013	Y-91	4.99E+18
	RDCORINV014	Y-92	5.25E+18
	RDCORINV015	Y-93	6.03E+18
	RDCORINV016	Zr-95	7.03E+18
	RDCORINV017	Zr-97	2.13E+19
	RDCORINV018	Nb-95	7.06E+18
	RDCORINV019	Mo-99	7.39E+18
	RDCORINV020	Tc-99m	6.46E+18
	RDCORINV021	Ru-103	1.12E+19
	RDCORINV022	Ru-105	3.91E+18
	RDCORINV023	Ru-106	4.26E+18
	RDCORINV024	Rh-105	3.67E+18
	RDCORINV025	Sb-127	4.06E+17
	RDCORINV026	Sb-129	1.23E+18
	RDCORINV027	Te-127	4.03E+17
	RDCORINV028	Te-127m	5.38E+16
	RDCORINV029	Te-129	1.21E+18
	RDCORINV030	Te-129m	1.80E+17
	RDCORINV031	Te-131m	4.01E+18
	RDCORINV032	Te-132	5.52E+18
	RDCORINV033	I-131	3.87E+18
	RDCORINV034	I-132	5.61E+18



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Safety Related	X Non-Safety Related
----------------	----------------------

Calc No. 2009-11222	
Rev. 2	Date
Page J-21	of J-243

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

RDCORINV	I-133	7.99E+18	I-134	8.78E+18	I-135	9.01E+18	Xe-133	7.68E+18	Xe-135	2.64E+18	Cs-134	7.75E+17	Cs-136	2.70E+17	Cs-137	9.80E+17	Ba-139	7.17E+18	Ba-140	6.93E+18	La-140	7.36E+18	La-141	6.54E+18	La-142	6.33E+18	Ce-141	6.58E+18	Ce-143	6.12E+18	Ce-144	1.08E+19	Pr-143	5.91E+18	Nd-147	2.62E+18	Np-239	7.57E+19	Pu-238	1.31E+16	Pu-239	1.58E+15	Pu-240	2.04E+15	Pu-241	5.93E+17	Am-241	6.67E+14	Cm-242	1.58E+17	Cm-244	7.59E+15
RDCORINV035	I-133	7.99E+18	I-134	8.78E+18	I-135	9.01E+18	Xe-133	7.68E+18	Xe-135	2.64E+18	Cs-134	7.75E+17	Cs-136	2.70E+17	Cs-137	9.80E+17	Ba-139	7.17E+18	Ba-140	6.93E+18	La-140	7.36E+18	La-141	6.54E+18	La-142	6.33E+18	Ce-141	6.58E+18	Ce-143	6.12E+18	Ce-144	1.08E+19	Pr-143	5.91E+18	Nd-147	2.62E+18	Np-239	7.57E+19	Pu-238	1.31E+16	Pu-239	1.58E+15	Pu-240	2.04E+15	Pu-241	5.93E+17	Am-241	6.67E+14	Cm-242	1.58E+17	Cm-244	7.59E+15

* SCALING FACTOR TO ADJUST THE CORE INVENTORY FOR POWER LEVEL

* REACTOR TYPE BASE BWR 3917 (2% ABOVE EPU VALUE OF 3840)

* POWER LEVEL (MWTH) SCALING FACTOR 1.0 (USE 2% ABOVE EPU VALUE)

RDCORSCA001 1.0 * SCALING FACTOR = 1.0



Calcs. For **ENVIRONMENTAL CONSEQUENCE**
ANALYSIS FOR PSEG ESPA

Calc No. 2009-11222
 Rev. 2 Date
 Page J-22 of J-243

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.
Prepared by		Date
Reviewed by		Date
Approved by		Date

```

* RDAPLFR001 PARENT (apply rel frags the same as prior versions)
*
* *****
* OUTPUT CONTROL DATA BLOCK
* *****
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
*
* OCENDAT1001 .FALSE. (SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC)
*
* OCIDEBUG001 0
*
* NAME OF THE NUCLIDE TO BE LISTED ON THE DISPERSION LISTINGS
*
* OCNUCOUT001 Cs-137 (NOT USED IF DEBUG=0)
*
* TYPE0NUMBER 0
* NUM0 NO TABLES OUTPUT=0
*
* INDREL INDRAD
* TYPE00OUT001 1 4
* TYPE00OUT002 1 9 XCCDF
* *****
* METEOROLOGICAL SAMPLING DATA BLOCK
* *****
* METEOROLOGICAL SAMPLING OPTION CODE:
*
* METCOD = 1, USER SPECIFIED DAY AND HOUR IN THE YEAR (FROM MET FILE),
* 2, WEATHER CATEGORY BIN SAMPLING,
* 3, 120 HOURS OF WEATHER SPECIFIED ON THE ATMOS USER INPUT FILE,
* 4, CONSTANT MET (BOUNDARY WEATHER USED FROM THE START),
* 5, STRATIFIED RANDOM SAMPLES FOR EACH DAY OF THE YEAR.
*
* M1METCOD001 2 (USER'S GUIDE SAMPLE PROBLEM A)
*

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	J-23 of J-243

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
	Prepared by	Date
	Reviewed by	Date
	Approved by	Date

* LAST SPATIAL INTERVAL FOR MEASURED WEATHER
 * M2LIMSPA001 10 (INTERVAL 10 = 50 MILES)
 * *
 * BOUNDARY WEATHER MIXING LAYER HEIGHT
 * *
 * M2BNDMXH001 1000. (METERS, USER'S GUIDE SAMPLE PROBLEM A)
 * *
 * BOUNDARY WEATHER STABILITY CLASS INDEX
 * *
 * M2IBDSTB001 4 (D-STABILITY, USER'S GUIDE SAMPLE PROBLEM A)
 * *
 * BOUNDARY WEATHER RAIN RATE
 * *
 * M2BNDRAN001 5.0 (MM/HR, USER'S GUIDE SAMPLE PROBLEM A)
 * *
 * BOUNDARY WEATHER WIND SPEED
 * *
 * M2BNDWND001 5.0 (M/S, USER'S GUIDE SAMPLE PROBLEM A)
 * *
 * NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
 * *
 * M4NRNINT001 5 (USER'S GUIDE SAMPLE PROBLEM A)
 * *
 * ENDPOINTS OF THE RAIN DISTANCE INTERVALS (KILOMETERS)
 * *
 * NOTE: THESE MUST BE CHOSEN TO MATCH THE SPATIAL ENDPOINT DISTANCES
 * SPECIFIED FOR ARRAY SPAEND (10 % ERROR IS ALLOWED).
 * *
 * 2.0 5.0 10.0 20.0 40.0 MILES
 * *
 * M4RNDSTS001 3.22 8.05 16.1 32.2 64.4 KM
 * *
 * NUMBER OF RAIN INTENSITY BREAKPOINTS
 * *



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	J-24 of J-243

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

M4NRINTN001 3 (USER'S GUIDE SAMPLE PROBLEM A)

* RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)

* M4NRATE001 2. 4. 6. (USER'S GUIDE SAMPLE PROBLEM A)

* NUMBER OF WEATHER SAMPLES PER BIN

* (NUREG-4551 USED 4. MORE SAMPLES ARE PREFERRED, BUT INCREASES

* COMPUTING TIME. 12 JUDGED A REASONABLE COMPROMISE)

* M4NSMPLS001 12 (4 MINIMUM, 24 MAXIMUM)

* INITIAL SEED FOR RANDOM NUMBER GENERATOR FOR WEATHER SAMPLING

* M4IRSEED001 79

* RELEASE DATA BLOCK

* Hope Creek releases based 2008 Level 2 PRA update

* See Calc HC-RF.XLS for plume development

* The 12 MAAP fission product groups are binned into 9 groups for MACCS2 as follows:

* MACCS2

* MAAP

* 1 Xe/Kr Noble Gases

* 2 I CsI

* 3 Cs CsOH

* 4 Te TeO2 (Sb, Te2) (see discussion below)

* 5 Sr SrO

* 6 Ru MoO2

* 7 La La2O3

* 8 Ce CeO2 (UO2) (see discussion below)

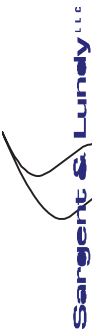
* 9 Ba BaO

* The MACCS2 Te group includes TeO2, Sb, and Te2. The TeO2 RF is used for this



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	J-25 of J-243
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* group. Although the Sb release fractions are sometimes slightly larger
 * than TeO2, the Sb mass in the core is typically substantially less than
 * the Te mass (0.3 lb Sb vs 92.3 lb Te from the MAAP 4.0.6 parameter file).
 * The Te2 RF is typically << than the TeO2 RF.
 *
 * The MACCS2 Ce group includes CeO2 and UO2. The CeO2 RF is used for this
 * group. The UO2 RF is typically << than the CeO2 RF, while the Ce mass
 * is << than the UO2 mass. The mass of UO2 is 337,307 lbs from MAAP parameter
 * file. The mass of Ce is 550.4 lbs from MAAP parameter file. Use of the
 * CeO2 RF is acceptable.
 *
 * It is noted that adding group RFs together is an incorrect approach. In the
 * extreme it could result in a RF > 1.0.
 *
 * Release height at top of containment (~61m scaled from Dwg A-0402-0) to maximize
 * 50 mile dose and cost for SAMA consideration. Sensitivity case will address
 * ground level release height.
 * Buoyant plume heat set at zero for the base case. Sensitivity case will address
 * plume heat via generic values.
 *
 * GE times based on HC Level 2 Report, Appendix E, Table E-1
 *
 * SOURCE TERM NUMBER 1 OF 11 (H/E IA - MAAP HC070500)
 *
 * RDATNAM2001 'H/E - IA'
 * RDOALARM001 1800.
 * RDNUMREL001 3
 * RDMAXRIS001 1
 * RDREFTIM001 0.5 0.5 0.5
 * RDPLHEAT001 0.0 0.0 0.0
 * RDPLHITE001 61. 61. 61.
 * RDPLUDUR001 3240. 7200. 36000.
 * RDPDELAY001 11160. 14400. 21600.
 * *general alarm sounds (30 min.)
 * *three plume segments
 * *first plume segment carries greatest risk
 * *time for dispersion and decay (midpoint)
 * *buoyant plume rise heat (watts)
 * *Release height of each plume (m)
 * *Plume duration = 0.9, 2.0, 10.0 hours
 * *plume segments start at 3.1 4.0, 6.0 hours after scram



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page J-26 of J-243

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

```

*
*
RDRELFRC001      Xe/Kr      I      Cs      Te(TeO2)      Sr      Ru(MoO2)      La      Ce(CeO2)      Ba
RDRELFRC001      8.10E-1  2.50E-1  6.00E-2  3.00E-2  6.00E-3  2.10E-6  4.00E-4  4.00E-3  2.40E-3
RDRELFRC002      3.00E-2  8.00E-2  2.20E-1  2.10E-1  1.10E-2  0.00E-0  8.00E-4  1.20E-2  5.10E-3
RDRELFRC003      3.00E-2  2.40E-1  5.00E-2  0.00E-0  0.00E-0  5.00E-7  0.00E-0  0.00E-0  0.00E-0
.
*****
***** RELEASE DATA BLOCK *****
*
* SOURCE TERM NUMBER 2 OF 11 (H/E ID - MAAP HC070504)
*
RDATNAM2001      'H/E - ID'
RDOALARM001      1800.
RDNUMREL001      3
RDMAXRIS001      1
RDREFTIM001      0.5  0.5  0.5
RDPLHEAT001      0.0  0.0  0.0
RDPLHITE001      61.  61.  61.
RDPLUDUR001      4500.  28800.  36000.
RDPDELAY001      17100.  21600.  50400.
*
*
RDRELFRC001      Xe/Kr      I      Cs      Te(TeO2)      Sr      Ru(MoO2)      La      Ce(CeO2)      Ba
RDRELFRC001      6.50E-1  2.00E-3  8.00E-4  1.00E-3  1.30E-2  4.20E-7  1.50E-3  1.30E-2  5.70E-3
RDRELFRC002      4.00E-2  1.10E-1  1.10E-1  2.30E-2  1.00E-3  3.00E-8  0.00E-0  0.00E-0  3.00E-4
RDRELFRC003      8.00E-2  3.80E-2  2.92E-2  2.10E-2  0.00E-0  3.60E-7  0.00E-0  0.00E-0  0.00E-0
.
*****
***** RELEASE DATA BLOCK *****
*
* SOURCE TERM NUMBER 3 OF 11 (H/E V (BOC) - MAAP HC070524)
*
RDATNAM2001      'H/E - V'
RDOALARM001      1800.
RDNUMREL001      3
RDMAXRIS001      1
RDREFTIM001      0.5  0.5  0.5
RDPLHEAT001      0.0  0.0  0.0

```

*general alarm sounds (30 min.)
*three plume segments
*first plume segment carries greatest risk
*time for dispersion and decay (midpoint)
*buoyant plume rise heat (watts)
*Release height of each plume (m)
*Plume duration = 1.25, 8.0, 10.0 hours
*plume segments start at 4.75, 6.0, 14.0 hours after scram

*general alarm sounds (30 min.)
*three plume segments
*first plume segment carries greatest risk
*time for dispersion and decay (midpoint)
*buoyant plume rise



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page J-27 of J-243

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

RDPLHITE001 61. 61. *Release height of each plume (m) Ba
 RDPLUDUR001 4788. 9000. 3600. *Plume duration = 1.33, 2.5, 1.0 hours
 RDPDELAY001 612. 5400. 24840. *plume segments start at 0.17, 1.5, 6.9 hours after scram
 * Xe/Kr I Cs Te (TeO2) Sr Ru (MoO2) La Ce (CeO2) Ba
 RDRELFRC001 9.65E-1 4.10E-1 3.70E-1 4.60E-1 5.00E-3 2.20E-2 4.00E-4 1.00E-3 3.30E-2
 RDRELFRC002 5.00E-3 2.70E-1 4.00E-2 1.00E-2 0.00E-0 0.00E-0 0.00E-0 0.00E-0 0.00E-0 0.00E-0
 RDRELFRC003 1.00E-2 2.00E-2 1.00E-2 0.00E-0 1.50E-2 0.00E-0 2.70E-3 2.20E-2 6.00E-3

***** RELEASE DATA BLOCK *****

* SOURCE TERM NUMBER 4 OF 11 (H/I - MAAP HC070509)

* RDATNAM2001 'H/I'
 RDOALARM001 72000.
 RDNUMREL001 3
 RDMAXRIS001 1
 RDREFTIM001 0.5 0.5 0.5 *first plume segment carries greatest risk
 RDPLHEAT001 0.0 0.0 0.0 *time for dispersion and decay (midpoint)
 RDPLHITE001 61. 61. 61. *buoyant plume rise (watts)
 RDPLUDUR001 7200. 7200. 25200. *Release height of each plume (m)
 RDPDELAY001 108000. 115200. 136800. *Plume duration = 2.0, 2.0, 7.0 hours
 *plume segments start at 30, 32, 38 hours after scram

* Xe/Kr I Cs Te (TeO2) Sr Ru (MoO2) La Ce (CeO2) Ba
 RDRELFRC001 8.40E-1 1.00E-2 8.00E-3 2.60E-2 0.00E-0 1.10E-3 0.00E-0 0.00E-0 3.00E-4
 RDRELFRC002 1.40E-1 2.20E-1 3.20E-2 4.50E-2 1.00E-4 5.00E-4 5.00E-5 1.00E-4 6.00E-4
 RDRELFRC003 1.00E-2 7.00E-2 2.40E-2 8.00E-3 5.80E-3 0.00E-0 6.40E-4 8.10E-3 2.50E-3

***** RELEASE DATA BLOCK *****

* SOURCE TERM NUMBER 5 OF 11 (H/L - MAAP HC070515)

* RDATNAM2001 'H/L'
 RDOALARM001 72000.
 RDNUMREL001 3
 *general alarm sounds (20 hrs.)
 *three plume segments



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page J-28 of J-243

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

1 first plume segment carries greatest risk
 RDREFTIM001 0.5 0.5 0.5 *time for dispersion and decay (midpoint)
 RDPLHEAT001 0.0 0.0 0.0 *buoyant plume rise
 RDPLHITE001 61. 61. *Release height of each plume (m)
 RDPLUDUR001 14400. 14400. 36000. *Plume duration = 4.0, 4.0, 10.0 hours
 RDPDELAY001 129600. 165600. 180000. *plume segments start at 36, 46, 50 hrs after scram
 *
 * Xe/Kr I Cs Te (TeO2) Sr Ru (MoO2) La Ce (CeO2) Ba
 RDRELFRC001 9.30E-1 2.60E-1 6.00E-2 9.00E-2 4.00E-4 2.00E-4 1.00E-5 1.00E-4 9.00E-4
 RDRELFRC002 4.00E-2 5.00E-2 1.00E-2 1.00E-2 7.60E-3 6.20E-4 4.60E-4 4.90E-3 4.30E-3
 RDRELFRC003 2.00E-2 5.00E-2 6.00E-2 1.00E-2 0.00E-0 0.00E-0 0.00E-0 0.00E-0 0.00E-0

***** RELEASE DATA BLOCK *****

* SOURCE TERM NUMBER 6 OF 11 (M/E - MAAP HC070519)

RDATNAM2001 'M/E'
 RDOALARM001 3000.
 RDNUMREL001 3
 RDMAXRIS001 1
 RDREFTIM001 0.5 0.5 0.5 *first plume segment carries greatest risk
 RDPLHEAT001 0.0 0.0 0.0 *time for dispersion and decay (midpoint)
 RDPLHITE001 61. 61. *buoyant plume rise
 RDPLUDUR001 5400. 16200. 36000. *Release height of each plume (m)
 RDPDELAY001 3600. 9000. 25200. *Plume duration = 1.5, 4.5, 10.0 hours
 * plume segments start at 1.0, 2.5, 7.0 hours after scram
 * Xe/Kr I Cs Te (TeO2) Sr Ru (MoO2) La Ce (CeO2) Ba
 RDRELFRC001 9.50E-1 1.50E-2 6.00E-3 8.00E-3 0.00E-0 7.90E-5 0.00E-0 0.00E-0 2.00E-4
 RDRELFRC002 3.00E-2 1.10E-2 2.00E-3 1.00E-3 1.40E-2 7.00E-6 1.60E-3 1.50E-2 6.10E-3
 RDRELFRC003 1.00E-2 4.40E-2 1.42E-1 2.60E-2 0.00E-0 0.00E-0 0.00E-0 0.00E-0 0.00E+0

***** RELEASE DATA BLOCK *****

* SOURCE TERM NUMBER 7 OF 11 (M/I - MAAP HC070516)



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page J-29 of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

RDATNAM2001 'M/I' *
 RDOALARM001 72000. *general alarm sounds (20 hrs.)
 RDNUMREL001 3 *three plume segments
 RDMAXRIS001 1 *first plume segment carries greatest risk
 RDREFTIM001 0.5 0.5 0.5 *time for dispersion and decay (midpoint)
 RDPLHEAT001 0.0 0.0 0.0 *buoyant plume rise
 RDPLHITE001 61. 61. *Release height of each plume (m)
 RDPLUDUR001 36000. 18000. 36000. *Plume duration = 10.0, 5.0, 10.0 hours
 RDPDELAY001 126000. 162000. 180000. *plume segments start at 35.0, 45.0, 50.0 hours after scram

	Xe/Kr	I	Cs	Te(TeO2)	Sr	Ru(MoO2)	Ia	Ce(CeO2)	Ba
RDRELFRC001	8.00E-1	4.00E-3	1.00E-3	1.20E-3	0.00E-0	7.50E-6	0.00E-0	0.00E-0	0.00E-0
RDRELFRC002	2.00E-2	8.00E-3	3.00E-3	2.00E-4	6.10E-3	4.00E-7	3.10E-4	3.70E-3	2.70E-3
RDRELFRC003	9.00E-2	4.50E-2	4.10E-2	1.36E-2	0.00E-0	0.00E-0	0.00E-0	0.00E+0	0.00E-0

***** RELEASE DATA BLOCK *****

* SOURCE TERM NUMBER 8 OF 11 (M/L - MAAP HC070502)

	Xe/Kr	I	Cs	Te(TeO2)	Sr	Ru(MoO2)	Ia	Ce(CeO2)	Ba
RDATNAM2001 'M/L'									
RDOALARM001	1800.								
RDNUMREL001	3								
RDMAXRIS001	1								
RDREFTIM001	0.5	0.5	0.5						
RDPLHEAT001	0.0	0.0	0.0						
RDPLHITE001	61.	61.	61.						
RDPLUDUR001	10800.	14400.	21600.						
RDPDELAY001	79200.	100800.	115200.						

	Xe/Kr	I	Cs	Te(TeO2)	Sr	Ru(MoO2)	Ia	Ce(CeO2)	Ba
RDRELFRC001	4.70E-1	0.00E-0	0.00E-0	0.00E-0	0.00E-0	2.00E-10	0.00E-0	0.00E-0	0.00E-0
RDRELFRC002	0.00E+0	3.10E-2	3.80E-2	1.20E-2	1.70E-3	1.00E-10	1.00E-5	5.10E-4	8.00E-4
RDRELFRC003	3.00E-2	9.00E-3	2.70E-2	1.00E-2	4.00E-4	3.30E-9	4.00E-6	1.70E-4	2.00E-4

***** RELEASE DATA BLOCK *****



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page J-30 of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

```

* * SOURCE TERM NUMBER 9 OF 11 (L/E - MAAP HC070503)
*
RDATNAM2001 'L/E'
RDOALARM001 1800.
RDNUMREL001 3
RDMAXRIS001 1
RDREFTIM001 0.5 0.5 0.5
RDPLHEAT001 0.0 0.0 0.0
RDPLHITE001 61. 61. 61.
RDPLUDUR001 3600. 7200. 36000.
RDPDELAY001 10800. 14400. 79200.
*
* * * * *
Xe/Kr I Cs Te(TeO2) Sr Ru(MoO2) La Ce(CeO2) Ba
RDRELFRC001 0.00E-0 1.50E-6 2.00E-7 2.20E-7 3.50E-11 3.20E-11 2.40E-12 2.00E-11 8.90E-11
RDRELFRC002 0.00E-0 2.00E-7 4.00E-7 2.00E-7 0.00E-0 0.00E-0 0.00E-0 0.00E-0 0.00E-0
RDRELFRC003 8.90E-1 6.00E-7 2.20E-6 4.00E-8 1.00E-12 3.00E-12 2.00E-13 1.00E-12 6.00E-12
*
* * * * *
* * SOURCE TERM NUMBER 10 OF 11 (L/L - MAAP HC070505)
*
RDATNAM2001 'L/L'
RDOALARM001 1800.
RDNUMREL001 3
RDMAXRIS001 1
RDREFTIM001 0.5 0.5 0.5
RDPLHEAT001 0.0 0.0 0.0
RDPLHITE001 61. 61. 61.
RDPLUDUR001 2700. 21600. 3600.
RDPDELAY001 17100. 115200. 136800.
*
* * * * *
Xe/Kr I Cs Te(TeO2) Sr Ru(MoO2) La Ce(CeO2) Ba
RDRELFRC001 0.00E-0 0.00E-0 0.00E-0 0.00E-0 7.20E-10 2.00E-12 7.60E-11 6.50E-10 3.10E-10
RDRELFRC002 9.80E-1 9.80E-5 1.10E-3 4.90E-5 0.00E-0 9.00E-12 0.00E-0 0.00E-0 1.00E-11

```

```

*general alarm sounds (30 min.)
*three plume segments
*first plume segment carries greatest risk
*time for dispersion and decay (midpoint)
*buoyant plume rise
*Release height of each plume (m)
*Plume duration = 1.0, 2.0, 10.0 hours
*plume segments start at 3.0, 4.0, 22.0 hours after scram

```

```

*general alarm sounds (30 min.)
*three plume segments
*first plume segment carries greatest risk
*time for dispersion and decay (midpoint)
*buoyant plume rise
*Release height of each plume (m)
*Plume duration = 0.75, 6.0, 1.0 hours
*plume segments start at 4.75, 32, 38 hours after scram

```



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page J-31 of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	

RDRELFRC003 0.00E-0 0.00E-0 0.00E-0 0.00E-0 0.00E-0 0.00E-0 0.00E-0 0.00E-0 0.00E-0

***** RELEASE DATA BLOCK *****
 * SOURCE TERM NUMBER 11 OF 11 (INTACT - MAAP HC070525A)
 *
 RDATNAM2001 'INTACT'
 RDOALARM001 1800. *general alarm sounds (30 min.)
 RDNUMREL001 3 *three plume segments
 RDMAXRIS001 1 *first plume segment carries greatest risk
 RDREFTIM001 0.5 0.5 0.5 *time for dispersion and decay (midpoint)
 RDPLHEAT001 0.0 0.0 0.0 *buoyant plume rise
 RDPLHITE001 61. 61. 61. *Release height of each plume (m)
 RDPLUDUR001 5400. 12600. 36000. *Plume duration = 1.5, 3.5, 10.0 hours
 RDPDELAY001 10800. 16200. 28800. *plume segments start at 3.0, 4.5, 8.0 hours after scram

	Xe/Kr	I	Cs	Te (TeO2)	Sr	Ru (MoO2)	La	Ce (CeO2)	Ba
RDRELFRC001	1.00E-3	1.60E-6	3.70E-7	3.50E-7	3.00E-11	2.40E-11	1.70E-12	1.40E-11	7.20E-11
RDRELFRC002	1.00E-3	1.00E-7	3.50E-7	1.50E-7	0.00E-0	0.00E-0	0.00E-0	0.00E-0	0.00E-0
RDRELFRC003	1.00E-2	0.00E-0	2.10E-7	2.00E-8	0.00E-0	0.00E-0	0.00E-0	0.00E-0	0.00E-0



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222

Rev.	2	Date	
Page	J-32	of	J-243

Client PSEG Nuclear Development	Prepared by	Date
Project PSEG ESPA	Reviewed by	Date
Proj. No 12380-001	Approved by	Date

* FILE NAME: SHCEAR.INP

* DESCRIPTIVE TITLE DESCRIBING THIS "EARLY" INPUT FILE

MIEANAM1001 'SHCEAR, SALEM & HOPE CREEK SAMA 95% EVACUATION) '
DCF_FILE001 'C:\MACCS2\DOSDATA.INP' (DCF file of MACCS 1.5.11.1)

* ORIGNATORS GRANT TEAGARDEN & DUSTIN WONG (7/3/2008)
* VERIFIER MIKE SAUNDERS (7/14/2008)

* ORGAN DEFINITION DATA BLOCK

* ORGANS TO BE USED FOR HEALTH EFFECTS

ORGNAM	ORGNAM	ORGNAM	ORGNAM	ORGNAM	ORGNAM
MIORGDEF001	'A-SKIN'				.TRUE.
MIORGDEF002	'A-RED MARR'				.TRUE.
MIORGDEF003	'A-LUNGS'				.TRUE.
MIORGDEF004	'A-THYROIDH'				.TRUE.
MIORGDEF005	'A-STOMACH'				.TRUE.
MIORGDEF006	'A-LOWER LI'				.TRUE.
MIORGDEF007	'L-EDEWBODY'				.TRUE.
MIORGDEF008	'L-RED MARR'				.TRUE.
MIORGDEF009	'L-BONE SUR'				.TRUE.
MIORGDEF010	'L-BREAST'				.TRUE.
MIORGDEF011	'L-LUNGS'				.TRUE.
MIORGDEF012	'L-THYROID'				.TRUE.
MIORGDEF013	'L-LOWER LI'				.TRUE.
MIORGDEF014	'L-BLAD WAL'				.TRUE.
MIORGDEF015	'L-LIVER'				.TRUE.
MIORGDEF016	'L-THYROIDH'				.TRUE.



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	J-33 of J-243
Non-Safety Related			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

```

*
*** REF/BASIS:
* ORGAN DEFINITION SCHEME IS REVISED FOR MACCS2
* USER'S GUIDE PAGE 6-12 AND SAMPLE PROBLEM A
* ALL SET TO TRUE TO INCLUDE ALL POTENTIAL ORGAN IMPACTS
*
*****
* MISCELLANEOUS DATA BLOCK
*****
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
* MIENDAT2001 .FALSE. (SET THIS VALUE TO .TRUE. TO SKIP CHRONC)
*
* DISPERSION MODEL OPTION CODE: 1 * STRAIGHT LINE
*                                2 * WIND-SHIFT WITH ROTATION
*                                3 * WIND-SHIFT WITHOUT ROTATION
*
MIIPOLUME001 2
*
* REF/BASIS:
*
* USER'S GUIDE PAGE 6-7, SAMPLE PROBLEM A, AND NUREG-1150
*
*****
* NUMBER OF FINE GRID SUBDIVISIONS USED BY THE MODEL
MINUMFIN001 7 (3, 5 OR 7 ALLOWED)
*
* LEVEL OF DEBUG OUTPUT REQUIRED, NORMAL RUNS SHOULD SPECIFY ZERO
MIIPRINT001 0
*
* LOGICAL FLAG SIGNIFYING THAT THE BREAKDOWN OF RISK BY WEATHER CATEGORY

```



Calcs. For **ENVIRONMENTAL CONSEQUENCE**
ANALYSIS FOR PSEG ESPA

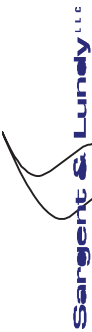
Calc No. 2009-11222
 Rev. 2 Date
 Page J-34 of J-243

Client	PSEG Nuclear Development	Safety Related	X	Non-Safety Related	
Project	PSEG ESPA	Prepared by		Date	
Proj. No	12380-001	Reviewed by		Date	
	Equip. No.	Approved by		Date	

```

* BIN ARE TO BE PRESENTED TO SHOW THEIR RELATIVE CONTRIBUTION TO THE MEAN
*
*      RISBIN
*
MIRISCAT001 .FALSE.
*
* FLAG INDICATING IF WIND-ROSES FROM ATMOS ARE TO BE OVERRIDDEN
*
MIOVRRID001 .FALSE. (USE THE WIND ROSE CALCULATED FOR EACH WEATHER BIN)
*****
* POPULATION DISTRIBUTION DATA BLOCK
*****
*
PDPOFLG001 FILE
*
*USES SITE FILE FOR POPULATION INPUTS
*****
* SHIELDING AND EXPOSURE FACTORS
*****
* THREE VALUES OF EACH PROTECTION FACTOR ARE SUPPLIED,
* ONE FOR EACH TYPE OF ACTIVITY:
*
* ACTIVITY TYPE:
* 1 - EVACUEES WHILE MOVING
* 2 - NORMAL ACTIVITY IN SHELTERING AND EVACUATION ZONE
* 3 - SHELTERED ACTIVITY
*
*** CLOUD SHIELDING FACTOR
*
* SITE      GG  PB  SEQ  SUR  ZION
* SHELTERING 0.7  0.5  0.65  0.6  0.5
*
* EVACUEES  NORMAL  SHELTER
SECSFACT001  1.    0.75  0.6    * USE SURRY SHELTER VALUE FROM

```

Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* * * * * NUREG/CR-4551. SALEM / HC IS CLOSEST TO SURRY.
 * * * * *
 * * * * * PROTECTION FACTOR FOR INHALATION
 * * * * *
 * * * * * EVACUEES NORMAL SHELTER
 SEPROTIN001 1. 0.41 0.33 * VALUES FOR NORMAL ACTIVITY AND SHELTERING SELECTED BY NRC STAFF, SAMPLE PROBLEM A & NUREG/CR-4551
 * * * * *
 * * * * * BREATHING RATE (CUBIC METERS PER SECOND)
 * * * * *
 * * * * * EVACUEES NORMAL SHELTER
 SEBRRATE001 2.66E-4 2.66E-4 2.66E-4 * NUREG/CR-4551
 * * * * *
 * * * * * SKIN PROTECTION FACTOR
 * * * * *
 * * * * * EVACUEES NORMAL SHELTER
 SESKPFAC001 1.0 0.41 0.33 * VALUES FOR NORMAL ACTIVITY AND SHELTERING SELECTED BY NRC STAFF, SAMPLE PROBLEM A & NUREG/CR-4551
 * * * * *
 * * * * * GROUND SHIELDING FACTOR
 * * * * *
 * * * * * SITE GG PB SEQ SUR ZION
 SHELTERING 0.25 0.1 0.2 0.2 0.1
 * * * * *
 * * * * * EVACUEES NORMAL SHELTER
 SEGSHFAC001 0.5 0.33 0.2 * VALUE FOR NORMAL ACTIVITY SELECTED BY NRC STAFF. SHELTER VALUE IS FOR SURRY. SAMPLE PROBLEM A & NUREG/CR-4551.
 * * * * *
 * * * * * RESUSPENSION INHALATION MODEL CONCENTRATION COEFFICIENT (/METER)
 * * * * *



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* RESCON = 1.E-4 IS APPROPRIATE FOR MECHANICAL RESUSPENSION BY VEHICLES.
 * RESHAF = 2.11 DAYS CAUSES 1.E-4 TO DECAY IN ONE WEEK TO 1.E-5, THE VALUE
 * OF RESCON USED IN THE FIRST TERM OF THE LONG-TERM RESUSPENSION EQUATION
 * USED IN CHRONC.
 *
 SERESCON001 1.E-4 (RESUSPENSION IS TURNED ON, NUREG/CR-4551)
 *
 * RESUSPENSION CONCENTRATION COEFFICIENT HALF-LIFE (SEC)
 *
 SERESHAF001 1.82E5 (2.11 DAYS, NUREG/CR-4551)
 *
 ***** REF/BASIS:
 *
 * SAMPLE PROBLEM A & NUREG/CR-4551
 *

 * EVACUATION ZONE DATA BLOCK

 *
 * SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
 *
 EZEANAM2001 'EVAC WITHIN 10 MILES (95%), RELOCATION MODELS APPLY ELSEWHERE'
 *
 * THE TYPE OF WEIGHTING TO BE APPLIED TO THE EMERGENCY RESPONSE SCENARIOS
 * YOU MUST SUPPLY A VALUE OF 'TIME' OR 'PEOPLE'
 *
 EZWTNAME001 'PEOPLE'
 *
 * WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO
 *
 EZWTFRAC001 0.95 (95% EVAC)
 *
 * LAST RING IN THE MOVEMENT ZONE
 *
 EZLASM001 7 (NO EXPOSURE AFTER TRAVELING TO 20 MILES)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* * * Flag defining the time at which evacuees "enter" the destination element

* * * TRAVELPOINT 'CENTERPOINT' (new option implemented at MACCS2 v. 1.11f)

* * * TRAVELPOINT 'BOUNDARY' (functionality derived from MACCS circa 1984)

* * * RADIAL EVACUATION SPEED (M/S) = speed to exit EPZ once travel begins

EZESPEED001	2.8	2.8	2.8	*(~95 MIN TRAVEL TIME TO CLEAR EPZ)
EZEVATYP001			'RADIAL'	
EZDURBE001			86400.0	
EZDURMID001			0.0	
EZREFPNT001			'ALARM'	
EZNUMEVA001			6	
EZDLTSHL001	3900.	3900.	3900.	3900. *(65 MIN DELAY FROM G.E. TO SHELTER)
EZDLTEVA001	0.	0.	0.	0. *(NO DELAY FROM SHELTER TO EVAC)

* * * THE EFFECT OF THE DLTSHL & DLTEVA VALUES IS A 65 MIN DELAY FOLLOWING GE

* * * PRIOR TO EVAC, WITH NO SHELTER PERIOD, FOR ALL RINGS. PREPARATIONS FOR

* * * EVAC ARE JUDGED NOT TO BE EQUIVALENT TO SHELTER SINCE PEOPLE ARE OUTDOORS

* * * LOADING VEHICLES, SECURING PROPERTY, ETC.

* * * *****REF/BASIS:

* * * * * WTNAM/WTFRAC -

* * * IN CONFORMANCE WITH IDCOR-NRC AGREEMENT, IT WILL BE ASSUMED THAT 5% OF

* * * THE POPULATION IN THE EVACUATION ZONE DO NOT OBEY THE EVACUATION ORDER AND

* * * REMAIN BEHIND. IN THE VERY EARLY HOURS OF AN ACCIDENT, THE FORCED REMOVAL

* * * OF PERSONS REFUSING TO EVACUATE IS UNLIKELY TO OCCUR. WITHIN A DAY OR SO,

* * * IT IS GENERALLY ANTICIPATED THAT THESE PEOPLE WOULD BE REMOVED FORCIBLY

* * * BY AUTHORITIES IF THERE WAS SIGNIFICANT RADIATION RISK. THEREFORE, THE

* * * FRACTION NOT OBEYING THE EVACUATION ORDER WOULD PROBABLY NOT RECEIVE AN

* * * ENTIRE EMERGENCY PHASE WORTH OF DOSE (I.E., ONE WEEK WORTH) AS MODELED.



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* IASMOV -

* EVACUATION ASSEMBLY AREAS ARE ASSUMED 20 MILES FROM THE SITE.

* USING THE LONGER DISTANCE (>10 MILES) INCREASES THE TIME OF POTENTIAL

* EXPOSURE AND DOSE BASED ON THE EARLY HEALTH EFFECTS MODEL.

* TRAVELPOINT -

* USE OF 'BOUNDARY' IS CONSISTENT WITH SAMPLE PROBLEM A.

* REFPT - (ALARM OR ARRIVAL)

* DEFINES THE REFERENCE POINT FOR ACTIONS IN SHELTER AND EVAC.

* IF 'ALARM' SELECTED, REFERENCE POINT IS 'OALARM' OF ATMOS FILE.

* 'OALARM' IS THE TIME THAT GENERAL EMERGENCY IS DECLARED BY SITE.

* NOTIFICATION PROCESSING TIME BY OFF-SITE OFFICIALS AND

* NOTIFICATION TO THE PUBLIC (I.E. COMMUNITY) IS NOT INCLUDED

* IN THIS TIME.

* IF 'ARRIVE' SELECTED, REFERENCE TIME IS WHEN FIRST PLUME ARRIVES SPATIAL

* ELEMENT.

* DURBEG/DURMID -

* THESE VARIABLES COULD BE UTILIZED TO PERFORM SENSITIVITIES ON EVAC PLANS,

* SPECIFICALLY EVAC IN PHASES WITH DIFFERENT ESPEED FOR EACH PHASE.

* WITH THEIR CURRENT VALUES, THE EVAC SPEED IS MAINTAINED CONSTANT.

* EZDLTSHL & EZDLTEVA -

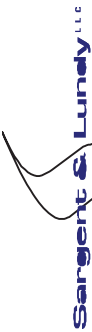
* EZDLTSHL & EZDLTEVA ARE THE TOTAL TIME BETWEEN WHEN THE PLANT EMERGENCY

* PERSONNEL DECIDE THAT A PROTECTIVE ACTION RECOMMENDATION (PAR)

* OF EVACUATION IS APPROPRIATE (GE DECLARATION), AND WHEN THE EVACUEES

* BEGIN MOVING.

* THE SEQUENCE OF EVENTS MODELED IS AS FOLLOWS:



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

- (1) UTILITY PERSONNEL CLASSIFY THE ACCIDENT AS A GENERAL EMERGENCY REQUIRING A RECOMMENDATION FOR A FULL 10 MILE EPZ EVACUATION. (T=0 FOR 'OALARM' AT TIME OF SITE G.E. DECLARATION)
 - (2) 15 MINUTES FOR NOTIFICATION PROCESSING BY STATE AND INITIATION OF COMMUNICATION TO LOCAL COMMUNITY FOR EVACUATION (ADVISORY TO EVACUATE).
 - (3) 50 MINUTES FOR MEDIAN WEIGHTED DEPARTURE TIME, DERIVED FROM SALEM / HOPE CREEK SITE ETE STUDY (KLD ASSOCIATES, KLD TR-356, FEBRUARY 2004). SEE CALC SLHC-EVAC.XLS FOR DETAILS.
- AN AVERAGE EVAC INITIATION TIME FROM GE IS DEVELOPED AS FOLLOWS:
- 15 MIN (NOTIFICATION) + 50 MIN (MEDIAN PREP & DEPART TIME)
= 65 MIN = 3900 SEC
- ESPEED - (IN METERS/SEC)
- A TIME WEIGHTED EVACUATION SPEED WAS CALCULATED BASED ON ETE STUDY TIMES (TABLES 5-1 & 6-1) ACCOUNTING FOR SEASON, DAY OF WEEK, TIME OF DAY, AND WEATHER CONDITIONS. THE TIME WEIGHTED EVACUATION TIME IS ~145 MINUTES. SEE CALC SLHC-EVAC.XLS FOR DETAILS.
- THE EVAC TIME ESTIMATES CONTAIN 50 MINUTES OF NON-TRAVEL TIME: THEREFORE, THE TRAVEL TIME FOR THE SPEED CALC IS:
145 MIN - 50 MIN. (NON TRAVEL TIME) = 95 MIN
- IT WILL BE ASSUMED THAT THE MAXIMUM DISTANCE THAT MUST BE TRAVELED THROUGH THE EPZ IS APPROXIMATELY 10 MILES. THIS IS CONSISTENT WITH THE ASSUMPTIONS IN NUREG/CR-4551, VOL. 2, REV. 1, PART 7, SECTION 3.1.4:



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	J-40 of J-243
Non-Safety Related		Date	
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
	Prepared by	Date	
	Reviewed by	Date	
	Approved by	Date	

* D = 10.0 MILES = 16,093 METERS

* AND FINALLY,

* ESPEED = D / ETIME = 16,093 METERS / (95 MIN * 60 SEC/MIN)

* ESPEED = 2.8 M/S

* SHELTER AND RELOCATION ZONE DATA BLOCK

* DURATION OF THE EMERGENCY PHASE (SECONDS FROM PLUME ARRIVAL)

* SRENDEMP001 604800. (ONE WEEK, NUREG/CR-4551)

* CRITICAL ORGAN FOR RELOCATION DECISIONS

* SRCRIORG001 'L-EDEWBODY' (NUREG/CR-4551)

* HOT SPOT RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)

* SRTIMHOT001 43200. (ONE-HALF DAY, NUREG/CR-4551)

* NORMAL RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)

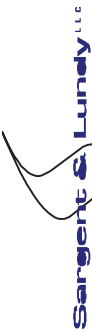
* SRTIMNRM001 86400. (ONE DAY, NUREG/CR-4551)

* HOT SPOT RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)

* SRDOSHOT001 0.01 (1 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)

* NORMAL RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)

* SRDOSNRM001 0.01 (1 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)

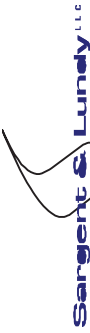


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	J-41 of J-243
Non-Safety Related		Prepared by	Date
Client	PSEG Nuclear Development	Reviewed by	Date
Project	PSEG ESPA	Approved by	Date
Proj. No	12380-001	Equip. No.	

```

*
*** REF/BASIS:
*
* CRIORG - EPA-400 SPECIFIES THAT PAR'S ARE BASED ON EFFECTIVE,
* COMMITTED EQUIVALENT WHOLEBODY DOSES (EDEWBODY, USER'S GUIDE P. 6-10) .
*
* TIMNRM -
*
* EVACUATION/RELOCATION IN AREAS BEYOND 10 MILES WILL TAKE PROGRESSIVELY
* LONGER AS THE DISTANCE FROM THE SITE INCREASES. GIVEN THAT IT COULD TAKE
* OVER 5 HOURS TO EVACUATE THE EPZ, 24 HOURS SEEMS A REASONABLE ESTIMATE
* TO SELECTIVELY EVACUATE BEYOND THIS DISTANCE.
*
* DOSNRM -
*
* THE STATE IS EXPECTED TO EVACUATE ANY POPULATION, EVEN IF IT
* IS BEYOND THE 10 MILE PLUME EPZ, IF THE EPA PAG IS EXCEEDED (1 REM) .
* ALTHOUGH MACCS WILL INTEGRATE THIS DOSE OVER 1 WEEK, THE STATE WOULD
* CONSIDER TIME INTERVALS ON THE ORDER OF A FEW HOURS. SINCE THE MAJORITY
* OF THE EARLY EXPOSURE IS BELIEVED TO BE THE RESULT OF CLOUDSHINE, THE USE
* OF A 1 REM LIMIT WILL MODEL THIS STRATEGY REASONABLY WELL. SOURCE OF 1 REM
* CRITERION IS EPA-400 SECTION 2.3.1.
*
*****
* EARLY FATALITY MODEL PARAMETERS
*
* NUMBER OF EARLY FATALITY EFFECTS
*
EFNUMFA001 3
*
* ORGNAM EFFACA EFFACB EFFTHR
*
EFATAGRP001 'A-RED MARR' 3.8 5.0 1.5
EFATAGRP002 'A-LUNGS' 10.0 7.0 5.0
EFATAGRP003 'A-LOWER LI' 15.0 10.0 8.0

```



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page J-42 of J-243

Client PSEG Nuclear Development	Prepared by
Project PSEG ESPA	Reviewed by
Proj. No 12380-001	Approved by
Equip. No.	Date

```

*
*
*** REF/BASIS:
*
* USER'S MANUAL PAGE 6-33, CONSISTENT WITH:
*
* HEMATOPOIETIC SYND (RED MARR):
* NUREG/CR-4214, REV 2, PART 1, SECTION 2.1.1.1, PG 12
* SECTION 3.1.1, PG 59, AND
* SECTION 2.1.1.4, TABLE 2.4.
*
* PULMONARY SYNDROME (LUNGS):
* NUREG/CR-4214, REV. 2, PART 1, SECTION 2.1.1.2, PG 14
* SECTION 3.1.2, PG 67, AND SECTION 2.1.1.4, TABLE 2.4.
*
* GASTROINTESTINAL SYNDROME (LOWER LI):
* NUREG/CR-4214, REV. 2, PART 1, SECTION 2.1.1.3, PG 17, AND
* SECTION 2.1.1.4, TABLE 2.4.
*
*****
* EARLY INJURY MODEL PARAMETERS
*
* NUMBER OF EARLY INJURY EFFECTS
EINUMEIN001 7
*
*      EINAME      ORGNAM      EISUSC      EITHRE      EIFACA      EIFACB
*
EINJUGRP001 'PRODROMAL VOMIT' 1.      .5      2.      3.
EINJUGRP002 'DIARRHEA'      1.      1.      3.      2.5
EINJUGRP003 'PNEUMONITIS'  1.      2.5     5.      7.
EINJUGRP004 'SKIN ERYTHEMA' 1.      3.      6.      5.
EINJUGRP005 'TRANSEPIDERMAL' 1.      10.     20.     5.
EINJUGRP006 'THYROIDITIS' 1.      1000.   240.    2.

```




Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	J-43 of J-243
Non-Safety Related		Date	
Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
Equip. No.			

```

EINJUGRP007 'HYPOTHYROIDISM' 1. 2. 60. 1.3
*
*
*** REF/BAISIS:
*
* ALL VALUES CONSISTENT WITH NUREG/CR-4551 AS UPDATED BY THE MORE RECENT
* (1993) NUREG/CR-4214, REV. 2,PART 1, TABLE 2.5
*
* NUREG/CR-4214 REVISED VALUES FOR PNEUMONITIS AND DELETED THYROIDITIS ON
* THE BASIS THAT NO EVIDENCE EXISTS TO SUGGEST THAT BRIEF EXTERNAL EXPOSURES
* CAN INDUCE ACUTE THYROIDITIS WITHOUT CAUSING DEATH BY OTHER CAUSES,
* E.G., BONE MARROW (SECTION 2.1.2.3) THE THYROIDITIS THRESHOLD DOSE
* WAS INCREASED TO THE MAXIMUM VALUE (1000) TO IMPLEMENT DELETION. DOSES BELOW
* THE EITHER THRESHOLD WILL NOT RESULT IN ORGAN INJURY.
*
*****
* LATENT CANCER PARAMETERS
*
* NUMBER OF LATENT CANCER EFFECTS
*
LCNUMACA001 7
*
* THRESHOLD DOSE FOR APPLYING THE DOSE DEPENDENT REDUCTION FACTOR
*
LCDDTHRE001 0.2 (20 REM, BELOW WHICH DDREFA WILL BE APPLIED)
*
* DOSE THRESHOLD FOR LINEAR DOSE RESPONSE (SV)
*
LCACTHRE001 0.0 (LINEAR-QUADRATIC MODEL IS NOT BEING USED)
*
*
* ACNAME ORGNAM ACSUSC DOSEFA DOSEFB CFRISK CIRISK DDREFA
*
LCANCERS001 'LEUKEMIA' 'L-RED MARR' 1.0 1.0 0.0 0.0 9.70E-3 0.0 2.0
LCANCERS002 'BONE' 'L-BONE SUR' 1.0 1.0 0.0 0.0 1.20E-4 0.0 2.0
LCANCERS003 'BREAST' 'L-BREAST' 1.0 1.0 0.0 0.0 5.40E-3 1.7E-2 1.0

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

Client	Project	Proj. No	Equip. No.	Safety Related	X	Non-Safety Related	Prepared by	Date	
LCANCERS004	'LUNG'			1.0	1.0	0.0	1.55E-2	0.0	2.0
LCANCERS005	'THYROID'			1.0	1.0	0.0	7.20E-4	7.2E-3	1.0
LCANCERS006	'GI'			1.0	1.0	0.0	3.36E-2	0.0	2.0
LCANCERS007	'OTHER'			1.0	1.0	0.0	2.76E-2	0.0	2.0

*** REF/BASIS:

* ABOVE VALUES TAKEN FROM SAMPLE PROBLEM A, AS UPDATED BY NUREG/CR-4214.
 * NUREG/CR 4551 USED THE LINEAR-QUADRATIC MODEL WHICH IS NO LONGER
 * RECOMMENDED (PER USER'S GUIDE AND NUREG/CR-4214, ADDENDUM I)

* CFRISK VALUES MATCH THOSE OF NUREG/CR-4214 ADDENDUM II, TABLE 3.4, WHICH
 * CORRECTS AN EARLIER ERROR IN NUREG/CR-4214 ADDENDUM I FOR 'BONE'.

* EPA 402-R-93-076 (JUNE 1994) RECOMMENDS A DDREFA OF 2.0 FOR ALL EXCEPT
 * BREAST CANCER (KEPT AS 1.0). THIS MODELING MAINTAINS A DDREFA OF 1.0 FOR
 * THYROID AS RECOMMENDED IN NUREG/CR-4214.

* RESULT 1 OPTIONS BLOCK

* TOTAL NUMBER OF A GIVEN EFFECT (LATENT CANCER, EARLY DEATH, EARLY INJURY)

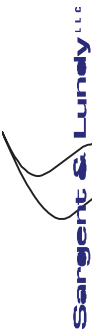
* NUMBER OF DESIRED RESULTS OF THIS TYPE

TYPE1NUMBER 14

TYPE1OUT001 'ERL FAT/TOTAL' 1 10 CCDF (0 TO 50 MILES)
 TYPE1OUT002 'CAN FAT/TOTAL' 1 10 CCDF (0 TO 50 MILES)

TYPE1OUT003 'ERL FAT/TOTAL' 1 1 CCDF (0 TO 1 MILES)
 TYPE1OUT004 'ERL FAT/TOTAL' 1 6 (0 TO 10 MILES)
 TYPE1OUT005 'CAN FAT/TOTAL' 1 6 (0 TO 10 MILES)

TYPE1OUT006 'ERL FAT/TOTAL' 2 2 (1 TO 2 MILES)



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page J-45 of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Approved by		Date	
	Equip. No.				

```

TYPE1OUT007 'ERL FAT/TOTAL' 3 3 (2 TO 3 MILES)
TYPE1OUT008 'ERL FAT/TOTAL' 4 4 (3 TO 4 MILES)
TYPE1OUT009 'ERL FAT/TOTAL' 5 5 (4 TO 5 MILES)
TYPE1OUT010 'ERL FAT/TOTAL' 6 6 (5 TO 10 MILES)
TYPE1OUT011 'ERL FAT/TOTAL' 7 7 (10 TO 20 MILES)
TYPE1OUT012 'ERL FAT/TOTAL' 8 8 (20 TO 30 MILES)
TYPE1OUT013 'ERL FAT/TOTAL' 9 9 (30 TO 40 MILES)
TYPE1OUT014 'ERL FAT/TOTAL' 10 10 (40 TO 50 MILES)
*****
* RESULT 2 OPTIONS BLOCK
* FURTHEST DISTANCE AT WHICH A GIVEN RISK OF EARLY DEATH IS EXCEEDED.
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
TYPE2NUMBER 2
*
* FATALITY RISK THRESHOLD
*
TYPE2OUT001 0. * (DISTANCE AT WHICH ANY FATALITIES OCCURRED, RISK > 0.0)
TYPE2OUT002 0.5 * (DISTANCE AT WHICH FATALITY RISK > 0.5)
*****
* RESULT 3 OPTIONS BLOCK
* NUMBER OF PEOPLE WHOSE DOSE TO A GIVEN ORGAN EXCEEDS A GIVEN THRESHOLD.
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
TYPE3NUMBER 0 * (NOT CURRENTLY USING)
*
* ORGAN NAME DOSE THRESHOLD (SV)
*
* TYPE3OUT001 'A-RED MARR' 1.5
* TYPE3OUT002 'A-LUNGS' 5.0
* TYPE3OUT003 'L-EDEWBODY' 0.05
*****
* RESULT 4 OPTIONS BLOCK

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* 360 DEGREE AVERAGE RISK OF A GIVEN EFFECT AT A GIVEN DISTANCE.

* POSSIBLE TYPES OF EFFECTS ARE:

- * 'ERL FAT/TOTAL'
- * 'ERL INJ/INJURY NAME'
- * 'CAN FAT/CANCER NAME'
- * 'CAN FAT/TOTAL'

* NUMBER OF DESIRED RESULTS OF THIS TYPE

TYPE4NUMBER 9

	RADIAL INDEX	TYPE OF EFFECT
TYPE4OUT001	1	'ERL FAT/TOTAL'
TYPE4OUT002	2	'ERL FAT/TOTAL'
TYPE4OUT003	3	'ERL FAT/TOTAL'
TYPE4OUT004	4	'ERL FAT/TOTAL'
TYPE4OUT005	5	'ERL FAT/TOTAL'
TYPE4OUT006	6	'ERL FAT/TOTAL'
TYPE4OUT007	10	'ERL FAT/TOTAL'
TYPE4OUT008	6	'CAN FAT/TOTAL'
TYPE4OUT009	10	'CAN FAT/TOTAL'

* RESULT 5 OPTIONS BLOCK

* TOTAL POPULATION DOSE TO A GIVEN ORGAN BETWEEN TWO DISTANCES.

* THESE DOSES ARE FOR WHOLE POPULATION, NOT AN INDIVIDUAL.

* (NOT FOR TESTING 0.25 SV @ 0.5 MILE CRITERIA. RATHER USE TYPE A RESULTS)

* (NOT FOR COMPARISON TO NRC SAFETY GOAL QHOS. RATHER USE RESULT 8)

* NUMBER OF DESIRED RESULTS OF THIS TYPE

TYPE5NUMBER



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page J-47 of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date

* * *
* ORGAN I1DIS5 I2DIS6
* TYPE5OUT001 'L-EDEWBODY' 1 1 CCDF (0-1 MILES)
* TYPE5OUT002 'L-EDEWBODY' 1 6 CCDF (0-10 MILES)
* TYPE5OUT003 'L-EDEWBODY' 1 10 CCDF (0-50 MILES)

* RESULT 6 OPTIONS BLOCK

* CENTERLINE DOSE TO AN ORGAN VS DIST BY PATHWAY, PATHWAY NAMES ARE AS FOLLOWS:

* PATHWAY NAME:

- 'CLD' - CLOUDSHINE
- 'GRD' - GROUNDSHINE
- 'INH ACU' - "ACUTE DOSE EQUIVALENT" FROM DIRECT INHALATION OF THE CLOUD
- 'INH LIF' - "LIFETIME DOSE COMMITMENT" FROM DIRECT INHALATION OF THE CLOUD
- 'RES ACU' - "ACUTE DOSE EQUIVALENT" FROM RESUSPENSION INHALATION
- 'RES LIF' - "LIFETIME DOSE COMMITMENT" FROM RESUSPENSION INHALATION
- 'TOT ACU' - "ACUTE DOSE EQUIVALENT" FROM ALL PATHWAYS
- 'TOT LIF' - "LIFETIME DOSE COMMITMENT" FROM ALL PATHWAYS

* NUMBER OF DESIRED RESULTS OF THIS TYPE

* TYPE6NUMBER 0
* * *
* ORGNAM PATHNM I1DIS6 I2DIS6
* TYPE6OUT001 'L-EDEWBODY' 'TOT ACU' 1 10 (0-50 MILES)
* TYPE6OUT002 'L-EDEWBODY' 'TOT LIF' 1 10 (0-50 MILES)

* RESULT 7 OPTIONS BLOCK

* CENTERLINE RISK OF A GIVEN EFFECT VS DISTANCE

* NUMBER OF DESIRED RESULTS OF THIS TYPE



Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA

Calc No.	2009-11222	
Rev.	2	Date
Page	J-48	of J-243

Safety Related X Non-Safety Related

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

```
*
* TYPE7NUMBER 0 *(NOT CURRENTLY USING)
*
* NAME I1DIS7 I2DIS7
*
* TYPE7OUT001 'ERL FAT/TOTAL' 1 10 (0-50 MILES)
* TYPE7OUT002 'CAN FAT/TOTAL' 1 10 (0-50 MILES)
*
* RESULT 8 OPTIONS BLOCK
*
* POPULATION WEIGHTED FATALITY RISK BETWEEN 2 DISTANCES
* (MAY BE COMPARED TO NRC SAFETY GOALS, QHOS)
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
* TYPE8NUMBER 2
*
* NAME I1DIS8 I2DIS8
*
* TYPE8OUT001 'ERL FAT/TOTAL' 1 1 (0-1 MILES)
* TYPE8OUT002 'CAN FAT/TOTAL' 1 6 (0-10 MILES)
*
* RESULT A OPTIONS BLOCK
*
* PEAK DOSE TO A GIVEN ORGAN
* (MAY BE USED TO TEST 0.25 SV @ 0.5 MILE CRITERIA. REQUIRES GRID
* INTERVALS AT DISTANCES OF INTEREST.)
*
* TYPEANUMBER 3 *
*
* ORGNAM I1DISA I2DISA
*
* TYPEAOUT001 'L-EDEWBODY' 1 1
* TYPEAOUT002 'L-EDEWBODY' 2 3
* TYPEAOUT003 'L-EDEWBODY' 4 5
```



Calcs. For ENVIRONMENTAL CONSEQUENCE

Calc No. 2009-11222

ANALYSIS FOR PSEG ESPA

Rev. 2 Date

Safety Related X Non-Safety Related

Page J-49 of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

* *****

* RESULT B OPTION BLOCK

* PEAK DOSE FOUND ON THE SPATIAL GRID

* TYPEBNUMBER 0 (NOT USED)

* *****

* TERMINATOR CARD

* *****

* EMERGENCY RESPONSE SCENARIO NUMBER 2

* *****

* EVACUATION ZONE DATA BLOCK

* SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED

* EZEANAM2001 'NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE'

* WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO

* EZWTFRAC001 0.05

* LAST RING IN THE MOVEMENT ZONE

* EZLASM0V001 0 (A ZERO TURNS OFF THE EVACUATION MODEL)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	J-50 of J-243
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

*****
* FILE NAME SHCCHR.INP
*
* DESCRIPTIVE TITLE DESCRIBING THIS "CHRONC" INPUT FILE
*
CHCHNAME001 'SHCCHR.INP - Salem & Hope Creek SAMA CHRONC, "New" COMIDA2-Based Food Model '
*
* MOST CURRENT ECONOMIC DATA USED: 2008 CPI, 2002 CENSUS OF AGRICULTURE, 2005 BEA & BLS DATA
*
* ORIGINATOR: GRANT TEAGARDEN (7/31/2008)
* VERIFIED: MIKE SAUNDERS (7/31/2008)
*
*****
* EMERGENCY RESPONSE COST DATA BLOCK
*****
* ECONOMIC DATA SOURCES USED IN THE SITE FILE ARE BASED ON THE MOST CURRENT
* COUNTY DATA FROM 2002 CENSUS OF AGRICULTURE, BUREAU OF LABOR STATISTICS (BLS)
* AND BUREAU OF ECONOMIC ANALYSIS (BEA).
*
* NUREG/CR-4551 ECONOMIC DATA IN THE CHRONC FILE IS UPDATED TO APRIL 2008
* USING THE CONSUMER PRICE INDEX (CPI). THE UNADJUSTED INDEX IS USED
* (SER. ID CUUR0000SA0) SINCE THE ADJUSTED INDEX IS SUBJECT TO REVISION BY BLS
* FOR UP TO FIVE YEARS.
*
* DAILY COST FOR A PERSON WHO IS EVACUATED (DOLLARS/PERSON-DAY)
* ESCALATED TO APRIL 2008 CPI VALUE OF 214.8
* INCREASE FROM $27/DAY (NUREG/CR-4551, PART 7 TABLE 5.1)
* CPI=109.6 FOR 1986 (ANNUAL VALUE)
* REF: BLS DATA SERIES ID CUUR0000SA0, NOT SEASONALLY ADJUSTED
*
* EMERGENCY PHASE - DAILY COST FOR PERSON RELOCATED ($/PERSON-DAY)
* CPI 2008/1986 FACTOR (214.8/109.6 = 1.96)
* 27.00 * (214.8/109.6) = 52.92 (FOOD, HOUSING, BUT NOT LOST INCOME)

```




Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	J-51 of J-243
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* EMERGENCY PHASE IS SHORT (~ 1 DAY TO 1 WK MAX) AND MANY WILL
 * NOT EXPERIENCE LOST INCOME (SALARY EMPLOYEES, < 18 YEARS OLD,
 * RETIREES, ETC.), SO OMISSION IS ACCEPTABLE.
 * CHEVACST001 52.92

* INTERMEDIATE PHASE - DAILY COST FOR PERSON RELOCATED (\$/PERSON-DAY)
 * CPI 2008/1986 FACTOR (214.8/109.6 = 1.96)
 * 27.00 * (214.8/109.6) = 52.92 (FOOD, HOUSING, BUT NOT LOST INCOME)
 * INTERMEDIATE PHASE IS LONGER (MONTHS), BUT INCLUDING LOST INCOME
 * HERE COULD SUBSTANTIALLY DOUBLE COUNT LOST INCOME ASSOCIATED WITH
 * INTERDICTION COST VARIABLE CHPOPCST. CHPOPCST INCLUDES 140 DAY
 * UNEMPLOYMENT TRANSITION PERIOD APPLIED TO PER CAPITA INCOME.
 * THE LOST INCOME PORTION DRIVES THE CHPOPCST VALUE (SEE NUREG/CR-
 * 4551 PART 7 SECTION 5.2.3).

CHRELCST001 52.92

 * LONG TERM PROTECTIVE ACTION DATA BLOCK

* THE INTERMEDIATE PHASE APPROACH HAS BEEN REVISED FOR MACCS2. VARIABLE TMIPND
 * IS NO LONGER USER DEFINED, BUT IS CALCULATED BY THE CODE AS FOLLOWS:

* TMIPND = DUR_INTPHAS + ENDEMP

* ENDEMP IS DEFINED IN THE EARLY FILE AS 7 DAYS

* DUR_INTPHAS IS DEFINED HERE IN THE CHRONC FILE

* DUR_INTPHAS 1.58E7 (in seconds) (1/2 YEAR INTERMEDIATE PHASE)

* LONG-TERM PHASE DOSE PROJECTION PERIOD, THE DURATION OF THE EXPOSURE
 * PERIOD OVER WHICH THE LONG-TERM DOSE CRITERION IS EVALUATED (SECONDS)



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	J-52 of J-243

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.

Prepared by	Date
Reviewed by	Date
Approved by	Date

CHTMPACT001 1.42E8 (4 1/2 YEAR LONG TERM PHASE)
 * DOSE CRITERION FOR INTERMEDIATE PHASE RELOCATION (Sv) (YEAR 0-0.5)
 *
 CHDSCRTI001 0.01 (1 REM)
 * DOSE CRITERION FOR LONG-TERM PHASE RELOCATION (Sv) (YEAR 0.5-5)
 *
 CHDSCRLT001 0.03 (3 REM)
 * CRITICAL ORGAN NAME FOR LONG-TERM ACTIONS
 *
 CHCRTOCR001 'L-EDEWBODY'
 * Long Term Exposure Period Previously permanently set to:
 * one million years = 3.15 E13 seconds
 * MACCS2 allowable range is 3.15E7 (1 YEAR) to 1.E10 (317 YEARS)
 *
 CHEXPTIM001 1.58E9 (50 YEARS PER EPA STANDARD DEFAULT EXPONENTIAL FACTORS)
 *
 *** REF/BASIS:
 *
 * THE GUIDANCE OF EPA-400 IS USED HERE.
 *
 * DUR_INTPHAS/DSCRTI -
 *
 * DSCRTI IS THE INTERMEDIATE PHASE DOSE CRITERION. IF DSCRTI IS EXCEEDED FOR AN
 * INDIVIDUAL THE RESIDENT POPULATION IS ASSUMED TO BE RELOCATED FOR THE ENTIRE
 * INTERMEDIATE PHASE (I.E. RETURN TO LAND IS NOT PERMITTED IN THE
 * INTERMEDIATE PHASE).
 *
 * EPA-400 DEFINES THE INTERMEDIATE PHASE PAG AS 2 REM TEDE IN THE FIRST YEAR
 * (SECTION 4.2 AND TABLE 4-2 OF EPA-400). TO STAY CONSISTENT WITH THE GUIDANCE
 * OF EPA-400 AND ACHIEVE A REPRESENTATIVE MACCS2 ANALYSES



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development			
Project PSEG ESPA			
Proj. No 12380-001	Equip. No.	Prepared by	Date
		Reviewed by	Date
		Approved by	Date

* A 6 MONTH INTERMEDIATE PHASE WITH A 1.0 REM LIMIT IS USED.
* THE VALUES OF DUR_INTPHAS AND DSCRTI ARE SET TO THESE VALUES.
*
* THE BASIS FOR THESE VALUES IS THAT IF THE 1 REM LIMIT IS NOT EXCEEDED IN THE
* 6 MONTH TIME LIMIT THEN IT IS UNLIKELY THAT 2 REM IN 1 YEAR WILL BE EXCEEDED.
* ALSO, THE 6 MONTH INTERMEDIATE PHASE WILL ALLOW RESETTLEMENT TO BE MODELED
* MORE APPROPRIATELY (I.E., WHEN ALLOWED IN LATE PHASE BY CRITERION).
*
* NOTE THAT THE CALCULATIONAL BASIS FOR THE EPA-400 PAG AND THE MACCS
* INTERMEDIATE MODEL ARE CONSISTENT; BOTH CONSIDER GROUND SHINE AND
* RESUSPENSION ONLY.
*
* TMPACT/DSCRTL-
*
* NOTE THAT THE VARIABLE 'TMPACT' IS USED ONLY FOR RELOCATION DECISION MAKING
* AND NOT ACTUAL HABITATION DOSE ACCUMULATION. 'EXPTM' IS THE VARIABLE USED
* FOR ACTUAL HABITATION DOSE ACCUMULATION.
*
* THE LONG-TERM PROJECTION HABITATION DOSE IS INTERGRATED OVER THE LENGTH OF THE
* LONG-TERM PROJECTION PERIOD (TMPACT). IF THE DOSE TO THE CRITICAL ORGAN
* (CRTOCR) EXCEEDS THE LONG-TERM DOSE CRITERION (DSCRTL) THEN MITIGATIVE
* ACTIONS ARE ASSUMED TO BE TAKEN.
*
* EPA-400 SECTION 4.2.1 STATES THAT THE OBJECTIVE OF THE EPA PAG'S IS TO LIMIT
* DOSES IN THE SECOND AND SUBSEQUENT YEARS TO 0.5 REM/YEAR AND THE TOTAL OVER
* 50 YEARS TO 5 REM (INCLUDING THE 2 REM IN THE FIRST YEAR).
*
* THE MACCS LONG TERM PHASE MODEL CANNOT IMPLEMENT THIS PAG DIRECTLY SINCE
* THE DOSE INTEGRATION IS PERFORMED OVER THE SPECIFIED TIME AND THEN
* COMPARED TO THE DOSE CRITERION. NO CONSIDERATION IS GIVEN IN THE MACCS
* METHODOLOGY TO LIMITING ANY ONE YEAR'S DOSE TO LESS THAN 0.5 REM.
* THEREFORE, AN ALTERNATE APPROACH IS REQUIRED.
*
* THE NUREG-1150 ANALYSES WERE PERFORMED USING THE ASSUMPTION OF 2 REM IN THE
* FIRST YEAR AND 0.5 REM FOR 4 YEARS, OR 4 REM (0.04 SV) IN FIVE YEARS.



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222																		
ANALYSIS FOR PSEG ESPA		Rev.	2																		
		Date																			
Safety Related	X	Non-Safety Related																			
<table border="1"> <tr> <td>Client</td> <td>PSEG Nuclear Development</td> <td>Prepared by</td> <td></td> <td>Date</td> <td></td> </tr> <tr> <td>Project</td> <td>PSEG ESPA</td> <td>Reviewed by</td> <td></td> <td>Date</td> <td></td> </tr> <tr> <td>Proj. No</td> <td>12380-001</td> <td>Approved by</td> <td></td> <td>Date</td> <td></td> </tr> </table>				Client	PSEG Nuclear Development	Prepared by		Date		Project	PSEG ESPA	Reviewed by		Date		Proj. No	12380-001	Approved by		Date	
Client	PSEG Nuclear Development	Prepared by		Date																	
Project	PSEG ESPA	Reviewed by		Date																	
Proj. No	12380-001	Approved by		Date																	

* THIS LEAVES AN ALLOWANCE OF 1 REM FOR YEARS 6-50 .

* ALTHOUGH NO BASIS FOR THIS ASSUMPTION COULD BE FOUND IN THE NUREG/CR-4551

* DOCUMENTS, IT IS REASONABLY CLEAR THAT THIS LONG TERM PAG WAS AN ATTEMPT TO

* MODEL THAT SPECIFIED IN EPA-400. THE DIFFICULTY WITH SPECIFYING 3 REM IN

* 49 YEARS DIRECTLY FOR THE LONG TERM PHASE IS THAT IN EXCESS OF 0.5 REM IN

* A YEAR MIGHT OCCUR WITHOUT PROTECTIVE ACTIONS BEING TAKEN AS LONG AS THE

* 49 YEAR INTEGRATED DOSE WAS LESS THAN 3 REM (2 REM HAVING BEEN "USED UP"

* IN THE FIRST YEAR) .

*

* SINCE RADIOACTIVE DECAY AND WEATHERING WILL REDUCE GROUNDSHINE AND

* RESUSPENSION DOSES OVER LONG TIMES, IT IS CLEAR, IN THE CONTEXT OF THE

* MACCS MODEL, THAT A SHORTER PROJECTION TIME COULD BE USED WITHOUT

* EXCEEDING THE EPA-400 PAG. THE NUREG/CR-4551 AUTHORS (SANDIA) APPEAR TO

* HAVE CONCLUDED THAT A 4 YEAR TIME PERIOD WAS APPROPRIATE, ALTHOUGH THEY

* DO NOT PROVIDE A REFERENCE OR BASIS. WHY THEY DID NOT MODEL THE

* 2 REM PAG FOR THE FIRST YEAR IN AN INTERMEDIATE PHASE IS UNCLEAR, BUT MAY

* BE DUE TO THE FACT THAT THE MACCS CODING FOR INTERMEDIATE PHASE MODELING

* WAS NOT VALIDATED AT THE TIME OF THE NUREG-1150 STUDIES .

*

* IT IS STATED IN EPA-400 THAT IF 2 REM IN THE 1ST YEAR AND 0.5 REM

* IN THE SECOND YEAR PAG'S ARE MET THAT IT IS UNLIKELY THAT THE 5 REM

* IN 50 YEARS WILL NOT BE MET.

*

* IT CAN BE SEEN THAT SANDIA CONCLUDED THAT 40% OF THE 50 YEAR DOSE

* (0.40*5 REM=2 REM) SHOULD NOT BE EXCEEDED IN THE 2ND TO 5TH YEAR, OR

* EQUIVALENTLY THAT NO MORE THAN 1 REM AVERAGED OVER THE 6TH TO 45TH YEARS

* (EVEN IF IT ALL OCCURRED IN THE SIXTH YEAR) WAS AN ACCEPTABLE MODEL.

*

* THIS ANALYSIS WILL USE THE FOLLOWING RATIONALE TO SPECIFY THE LONG TERM

* PHASE PARAMETERS:

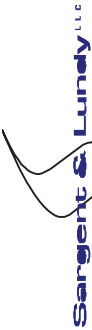
*

* 1. THE TOTAL LONG TERM DOSE CANNOT EXCEED 3 REM

*

* THE BASIS FOR THIS ASSUMPTION IS BASED ON THE VALUES SET FOR THE INTERMEDIATE

* PHASE AND THE GUIDANCE OF EPA-400. AFTER THE 6 MONTH INTERMEDIATE PHASE THERE



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
Safety Related		Date	
<input checked="" type="checkbox"/>	Non-Safety Related	Page	J-55 of J-243
<hr/>			
Client	PSEG Nuclear Development		
Project	PSEG ESPA		
Proj. No	12380-001	Equip. No.	
		Prepared by	
		Reviewed by	
		Approved by	
		Date	
		Date	
		Date	

* IS STILL 1 REM FOR THE NEXT 6 MONTHS GIVING A TOTAL OF 2 REM IN THE FIRST YEAR.
 * (ACTUAL DOSE IN THE SECOND SIX MONTHS IS EXPECTED TO BE LESS THAN THE 1 REM
 * DUE TO DECAY).
 *

* 2. THE LONG TERM CALCULATIONAL DOSE PROJECTION TIME WILL BE 4 1/2 YEARS
 *

* THE BASIS FOR THIS ASSUMPTION IS THAT THE AVERAGE ALLOWABLE EXPOSURE OVER
 * THE LONG TERM PROJECTION WILL BE EQUAL TO THE EPA-400 YEARLY LIMIT OF 0.5 REM
 * FOLLOWING THE FIRST YEAR.
 *

* IT SHOULD BE NOTED THAT THE COMBINED INTERMEDIATE AND LONG TERM DOSE
 * LIMITS SPECIFIED HERE ARE IDENTICAL TO THOSE USED BY SANDIA, EXCEPT THAT
 * THEY ARE EXPLICITLY SPLIT BETWEEN THE TWO PHASES.
 *

* EPA-400, "MANUAL OF PROTECTIVE ACTION GUIDES AND PROTECTIVE ACTIONS
 * FOR NUCLEAR INCIDENTS", US EPA, 1991.
 *

* CRTOCR -

* THE CRITICAL ORGAN IS TAKEN TO BE THE EDE WHOLDBODY (TEDE).
 *

* EXPTIM - IS A NEW VARIABLE ADDED IN MACCS2, PREVIOUSLY IT WAS HARD WIRED
 * INTO MACCS AS 1 MILLION YEARS. IN MACCS2, A MAXIMUM OF 317 YEARS IS ALLOWED
 * 50 YEARS IS USED FOR CONSISTENCY WITH PAG AND 50-YEAR COMMITMENT DOSE. A TIME
 * PERIOD OF GREATER THAN 50 YEARS WOULD MAINLY ONLY IMPACT SUCCEEDING
 * GENERATIONS, NOT THE ORIGINAL POPULATION DATA USED IN THE MODEL.
 *

 * DECONTAMINATION PLAN DATA BLOCK

* NUMBER OF LEVELS OF DECONTAMINATION

CHLVLDEC001 2



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	J-56 of J-243

Safety Related	X	Non-Safety Related
Client	PSEG Nuclear Development	
Project	PSEG ESPA	
Proj. No	12380-001	Equip. No.
Prepared by		
Reviewed by		
Approved by		

* CHTIMDEC001	5.184E6	1.0368E7	(60, 120 DAYS)		
* CHDSRFACT001	3.	15.			
* CHCDFRM0001	562.5	1250.			
* CHCDFRM0001	1102.00	2450.00			
* CHCDFRM0001	3000.	8000.			
* CHCDFRM0001	5880.	15679.			
* CHFRFDL0001	.3	.35			
* CHFRFDL0001	.7	.5			

* DECONTAMINATION TIMES CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
 * (SECONDS)

* DOSE REDUCTION FACTORS CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION

* COST OF FARM DECONTAMINATION PER FARMLAND UNIT AREA (DOLLARS/HECTARE)
 * FOR THE VARIOUS LEVELS OF DECONTAMINATION

* CPI 2008/1986 FACTOR (214.8/109.6 = 1.96)

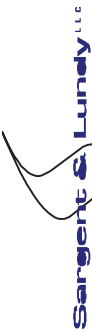
* COST OF NONFARM DECONTAMINATION PER RESIDENT PERSON (DOLLARS/PERSON)
 * FOR THE VARIOUS LEVELS OF DECONTAMINATION

* CPI 2008/1986 FACTOR (214.8/109.6 = 1.96)

* FRACTION OF FARMLAND DECONTAMINATION COST DUE TO LABOR
 * FOR THE VARIOUS DECONTAMINATION LEVELS

* FRACTION OF NON-FARM DECONTAMINATION COST DUE TO LABOR
 * FOR THE VARIOUS DECONTAMINATION LEVELS

* FRACTION OF TIME WORKERS IN FARM AREAS SPEND IN CONTAMINATED AREAS
 * FOR THE VARIOUS DECONTAMINATION LEVELS



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Page	J-57 of J-243
Non-Safety Related			
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* CHTFWKF0001 .10 .33

* FRACTION OF TIME WORKERS IN NON-FARM AREAS SPEND IN CONTAMINATED AREAS FOR THE VARIOUS DECONTAMINATION LEVELS

* CHTFWKNF001 .33 .33

* AVERAGE COST OF DECONTAMINATION LABOR (DOLLARS/MAN-YEAR)

* CHDLBCST001 35000.

* CPI 2008/1986 FACTOR (214.8/109.6 = 1.96)

* CHDLBCST001 68595.

* **** REF/BASIS

* ALL DECONTAMINATION VALUES FROM USER'S GUIDE & CONSISTENT WITH NUREG/CR-4551, UPDATED TO APRIL 2008 AS APPROPRIATE

* *****

* INTERDICTION COST DATA BLOCK

* *****

* DEPRECIATION (DETERIORATION) RATE DURING INTERDICTION PERIOD (PER YEAR)

* CHDPRATE001 .20 (NUREG/CR-4551 PART 7 TABLE 5.1)

* INVESTMENT INCOME RETURN (DISCOUNT RATE) DURING INTERDICTION PERIOD (PER YEAR)

* THIS VALUE SHOULD BE DERIVED AS A REAL RETURN RATE ADJUSTED FOR INFLATION.

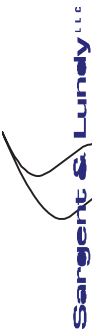
* NUREG/CR-4551 PART 7 TABLE 5.1 SPECIFIES A VALUE OF 0.12. NEI 05-01 (SECTION 8.5)

* SPECIFIES USE OF 0.07 FOR BASELINE AND SENSITIVITY OF 0.03.

* THIS IS CONSISTENT WITH OMB CIRCULAR A-4 AND NUREG/BR-0058 REV 4 (SECTION 4.3.5).

* CHDSRATE001 .07 (NEI 05-01)

* *****



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* POPULATION RELOCATION COST (DOLLARS/PERSON) :
 * ALTERNATIVE HOUSING, MOVING COSTS, AND LOST INCOME FOR PEOPLE IN
 * AREAS WHICH REQUIRE DECONTAMINATION, INTERDICTION, OR CONDEMNATION
 * PER NUREG/CR-4551 THIS VALUE IS DRIVEN BY LOST INCOME.
 *
 *CHPOPCST001 5000. (NUREG/CR-4551 PART 7 TABLE 5.1)
 * CPI 2008/1986, FACTOR (214.8/109.6 = 1.96)
 CHPOPCST001 9799.
 *
 * ABOVE VALUES CONSISTENT WITH USER'S GUIDE & NUREG/CR-4551,
 * UPDATED TO APRIL 2008 AS APPROPRIATE
 *
 *
 *
 *
 * GROUNDSHINE WEATHERING DEFINITION DATA BLOCK
 *
 *
 *
 * NUMBER OF TERMS IN THE GROUNDSHINE WEATHERING RELATIONSHIP (EITHER 1 OR 2)
 *
 CHNGWTRM001 2
 *
 * GROUNDSHINE WEATHERING COEFFICIENTS
 *
 *
 CHGWCOEF001 0.5 0.5 (SAMPLE PROB A, JON HELTON)
 *
 * HALF LIVES CORRESPONDING TO THE GROUNDSHINE WEATHERING COEFFICIENTS (S)
 *
 *
 CHTGWHLF001 1.6E7 2.8E9 (SAMPLE PROB A, JON HELTON)
 *
 * ABOVE VALUES CONSISTENT WITH USER'S GUIDE & NUREG/CR-4551
 *
 *
 *
 * RESUSPENSION WEATHERING DEFINITION DATA BLOCK
 *
 *
 *
 * NUMBER OF TERMS IN THE RESUSPENSION WEATHERING RELATIONSHIP

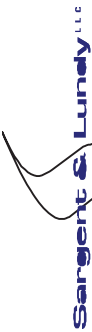


Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

```

* CHNRWTRM001      3
*
* RESUSPENSION CONCENTRATION COEFFICIENTS (/ METER)
* RELATIONSHIP BETWEEN GROUND CONCENTRATION AND INSTANTANEOUS AIR CONC.
*
* CHRWCOEF001  1.0E-5  1.0E-7  1.0E-9  (SAMPLE PROBLEM A, JON HELTON)
* HALF-LIVES CORRESPONDING TO THE RESUSPENSION CONCENTRATION COEFFICIENTS (S)
*
* CHTRWHLF001  1.6E7  1.6E8  1.6E9  (6 MONTHS, 5 YEARS, 50 YEARS)
* ABOVE VALUES CONSISTENT WITH USER'S GUIDE & NUREG/CR-4551
*
* *****
* SITE REGION DESCRIPTION DATA BLOCK
* *****
*
* SOME VALUES SPECIFIED HERE ARE CONSIDERED DEFAULT PLACEHOLDERS, REQUIRED BY
* MACCS2. THEY ARE ONLY UTILIZED IF POPFLG=UNIFORM (I.E. NO SITE FILE USED).
* DEFAULT PLACEHOLDER VALUES ARE TAKEN FROM USER GUIDE EXAMPLES P. 7-17
* IF POPFLG=FILE, THESE DEFAULT VALUES ARE OVERRIDDEN BY SITE FILE
*
* FRACTION OF AREA THAT IS LAND IN THE REGION
*
* CHFRACLD001  0.95  (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
* FRACTION OF LAND DEVOTED TO FARMING IN THE REGION
*
* CHFRFCFRM001  0.382  (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
*
* AVERAGE VALUE OF ANNUAL FARM PRODUCTION IN THE REGION (DOLLARS/HECTARE)
* (CASH RECEIPTS FROM FARMING PLUS VALUE OF HOME CONSUMPTION)/(LAND IN FARMS)
*
* CHFRMPRD001  371.0  (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)

```



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No. 2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page J-60	of J-243
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001	Equip. No.	Approved by	Date

* * FRACTION OF FARM PRODUCTION RESULTING FROM DAIRY PRODUCTION IN THE REGION
 * (VALUE OF MILK PRODUCED)/(CASH RECEIPTS FROM FARMING PLUS HOME CONSUMPTION)
 * *
 * CHDPFRCT001 0.198 (DEFAULT PLACEHOLDER, SITE FILE OVERRIDES THIS VALUE)
 * *
 * VALUE OF FARM WEALTH (DOLLARS/HECTARE)
 * (AVERAGE VALUE PER HECTARE OF FARM LAND AND BUILDINGS TO 50 MILES)
 * *
 * CHVALWF0001 16636. * AREA WEIGHTED AVERAGE OF THE SURROUNDING COUNTIES.
 * SECPOP2000 DATA IS NOT USED. INSTEAD THE MOST CURRENT
 * COUNTY DATA IS USED TO DEVELOP THIS VALUE (2008 DOLLARS).
 * SEE CALC SLHC-ECONSISTE.XLS FOR CALCULATION DETAILS.
 * THIS VALUE IS NOT OVERRIDEN BY SITE FILE.
 * *
 * FRACTION OF FARM WEALTH IN IMPROVEMENTS FOR THE REGION
 * *
 * CHFRFIM0001 0.25 * SURRY & PEACH BOTTOM (NUREG/CR-4551 PART 7, TABLE 5.4)
 * *
 * NON-FARM WEALTH, PROPERTY AND IMPROVEMENTS FOR THE REGION (DOLLARS/PERSON)
 * THE VALUE OF ALL RESIDENTIAL, BUSINESS, AND PUBLIC ASSETS WHICH WOULD BE
 * LOST IN THE EVENT OF PERMANENT INTERDICTION (CONDEMNATION) OF THE AREA
 * *
 * CHVALWNF001 275924. * AREA WEIGHTED AVERAGE OF THE SURROUNDING COUNTIES.
 * SECPOP2000 DATA IS NOT USED. INSTEAD THE MOST CURRENT
 * COUNTY DATA IS USED TO DEVELOP THIS VALUE (2008 DOLLARS).
 * SEE CALC SLHC-ECONSISTE.XLS FOR CALCULATION DETAILS.
 * THIS VALUE IS NOT OVERRIDEN BY SITE FILE.
 * *
 * FRACTION OF NON-FARM WEALTH IN IMPROVEMENTS FOR THE REGION
 * *
 * CHFRNFIM0001 0.8 (NUREG/CR-4551 PART 7 TABLE 5.1 FOR ALL SITES)
 * *****
 * CHFDPATH001 'NEW'
 * *



Calcs. For ENVIRONMENTAL CONSEQUENCE		2009-11222	
ANALYSIS FOR PSEG ESPA		Rev. 2	Date
Safety Related	X	Page J-61	of J-243
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* name of the COMIDA2 binary output file

* BIN_FILE001 'SAMP_A.BIN' (PATH, FILE, revised data file of 8/12/95)

* Dose limits triggering first year crop disposal of the separate milk and non-milk components of the diet, corresponding in purpose, more or less, to the MACCS 1.5 input variables PSCMLK and PSCOTH

* For NUREG-1150 calculations, the maximum allowable ground concentrations for production of milk and non-milk crops contaminated by an accident occurring in the growing season were derived based on an assumed maximum allowable dose of 5 rem effective or 15 rem thyroid, per the 1982 FDA guidance that's reprinted in the 1992 EPA PAG Manual. For purposes of comparison against the prior results, it is being assumed, for simplicity, that milk and non-milk crops contribute equally to the first year dose. Thus, the 5 rem effective dose limit used in NUREG-1150 is equally split between milk and non-milk crops, with 2.5 rem allowed for each. Similarly, the 15 rem thyroid limit is split into 7.5 and 7.5 rem for the milk and non-milk portions of the diet.

* FDA 63 FR-43402 (1998) replaced the previous values with new recommendations for PAGs of 5mSv (CEDE) and 50mSv (individual organ), which are used here.

* effective thyroid (doses in sieverts)

DOSEMILK001	0.0025	0.025
DOSEOTHR001	0.0025	0.025

* Annual dose limits for the subsequent year's (i.e., after the first year) interdiction of BOTH the milk and non-milk (combined) components of the diet

* Note: the long-term food criteria, GCMAXR, used for NUREG-1150 were based on an ingestion dose integrated from zero to infinity. It is not possible to translate those parameter values into corresponding annual dose limits, as is required by the COMIDA2-based food model. The "total" dose limits used in NUREG-1150 for "root uptake", 0.5 rem effective and 1.5 rem thyroid, were previously



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
Safety Related	X	Non-Safety Related	
Client PSEG Nuclear Development		Prepared by	Date
Project PSEG ESPA		Reviewed by	Date
Proj. No 12380-001		Approved by	Date
Equip. No.			

* used here as annual dose limits for interdiction of food production in years the
 * years subsequent to the accident.
 *
 * FDA 63 FR-43402 (1998) replaced the previous values with new recommendations for PAGs
 * of 5mSv (CEDE) and 50mSv (individual organ), which are used here.
 *

* effective thyroid (doses in sieverts)
 DOSELONG001 0.005 0.050

* NUMBER OF NUCLIDES IN THE WATER INGESTION PATHWAY MODEL
 CHNUMWPI001 4 (NUREG/CR-4551)

* TABLE OF NUCLIDE DEFINITIONS IN THE WATER INGESTION PATHWAY MODEL

* IF A SITE DATA FILE IS DEFINED, THE DATA DEFINING THE WATERSHED INGESTION
 * FACTOR IS SUPERSEDED BY THE CORRESPONDING DATA IN THE SITE DATA FILE

INITIAL	ANNUAL	INGESTION	FACTOR
WASHOFF	WASHOFF	(Bq INGESTED) /	
FRACTION	RATE	(Bq IN WATER)	
NAMMPI	WSHFRI	WSHRTA	WINGF
CHWTRISO001	Sr-89 0.01	0.004	5.0E-6 (NUREG/CR-4551)
CHWTRISO002	Sr-90 0.01	0.004	5.0E-6 (NUREG/CR-4551)
CHWTRISO003	Cs-134 0.005	0.001	5.0E-6 (NUREG/CR-4551)
CHWTRISO004	Cs-137 0.005	0.001	5.0E-6 (NUREG/CR-4551)

* SPECIAL OPTIONS DATA BLOCK

* DETAILED PRINT OPTION CONTROL SWITCHES, LOOK AT THE CODE BEFORE TURNING ON!
 * KSWDSC

CHKSWTCH001 0



**Calcs. For ENVIRONMENTAL CONSEQUENCE
ANALYSIS FOR PSEG ESPA**

Calc No. 2009-11222
Rev. 2 Date
Page J-63 of J-243

Client PSEG Nuclear Development	<input checked="" type="checkbox"/> Safety Related	<input type="checkbox"/> Non-Safety Related
Project PSEG ESPA	Prepared by	
Proj. No 12380-001	Reviewed by	
Equip. No.	Approved by	
	Date	Date
	Date	Date

* DEFINE THE TYPE 9 RESULTS

* LONG-TERM POPULATION DOSE IN A GIVEN REGION BROKEN DOWN BY THE 12 PATHWAYS

* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED

* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12

TYPE9NUMBER 2 (UP TO 10 ALLOWED)

* ORGNAM INNER OUTER

TYPE9OUT001 'L-EDEWBODY' 1 6 (0-10 MILES)

TYPE9OUT002 'L-EDEWBODY' 1 10 (0-50 MILES)

* ECONOMIC COST RESULTS IN A REGION BROKEN DOWN BY 12 TYPES OF COSTS

* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED

* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12

TYP10NUMBER 1 (UP TO 10 ALLOWED)

* INNER OUTER

TYP10OUT001 1 10 (0-50 MILES)

* DEFINE A FLAG THAT CONTROLS THE PRODUCTION OF THE ACTION DISTANCE RESULTS

* SPECIFYING A VALUE OF .TRUE. TURNS ON ALL 8 OF THE ACTION DISTANCE RESULTS,

* A VALUE OF .FALSE. WILL ELIMINATE THE ACTION DISTANCE RESULTS FROM THE OUTPUT.

TYP11FLAG11 .TRUE.

* IMPACTED AREA/POPULATION RESULTS IN A REGION BROKEN DOWN BY 6 TYPES OF IMPACTS

*



Calcs. For ENVIRONMENTAL CONSEQUENCE		Calc No.	2009-11222
ANALYSIS FOR PSEG ESPA		Rev.	2
		Date	
		Page	J-64 of J-243

Safety Related	X	Non-Safety Related
Client PSEG Nuclear Development		
Project PSEG ESPA		
Proj. No	12380-001	Equip. No.
Prepared by		Date
Reviewed by		Date
Approved by		Date

* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED

* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 8

*
 * TYP12NUMBER 2 (UP TO 10 ALLOWED)

*
 * INNER OUTER

*
 * TYP12OUT001 1 6 (0-10 MILES)

*
 * TYP12OUT002 1 10 (0-50 MILES)

*
 * *****

* Maximal annual food ingestion dose to an individual, requested by IXOT13

*
 * This result is calculated after accounting for temporary or permanent interdiction. It is only available for the "new" food model.

*
 * NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED

*
 * TYP13NUMBER 0 (UP TO 10 ALLOWED)

*
 * IRAD13 is the radial spatial interval at which results are requested

*
 * ORGN13 is the name of the organ for which results are requested (allowable values for ORGN13 are 'EFFECTIVE' or 'THYROID')

*
 * IRAD13 ORGN13

*
 * TYP13OUT001 2 EFFECTIVE

*
 * TYP13OUT002 4 EFFECTIVE

*
 * TYP13OUT003 6 EFFECTIVE

*
 * TYP13OUT004 9 EFFECTIVE

*
 * .



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-65	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

SL HC MET 2004 - SHCMET04.inp - Orig: G. Tegarden 7/22/08 Verf: M. Saunders 7/24/08

DAY HR DRSP S PC - Supporting Calc: SLHC-MET.XLS

001 01 040326000
001 02 040316000
001 03 070326000
001 04 060336000
001 05 060286000
001 06 060306000
001 07 070297000
001 08 080347000
001 09 080386000
001 10 080514000
001 11 070503000
001 12 070463000
001 13 070413000
001 14 070353000
001 15 060304000
001 16 050264000
001 17 050255000
001 18 050075000
001 19 050115000
001 20 010076000
001 21 130126000
001 22 150237000
001 23 150236000
001 24 160196000
002 01 160276000
002 02 140216000
002 03 150256000
002 04 140356000
002 05 150465000
002 06 150325000
002 07 150245000
002 08 150585004
002 09 160525000
002 10 010295000
002 11 160215000
002 12 160155000
002 13 030204000
002 14 040264000
002 15 040194000
002 16 050174000
002 17 040135000
002 18 030145000
002 19 010086000
002 20 150286000
002 21 160306000
002 22 150166000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-66	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

002 23 150196000
002 24 150195000
003 01 140205000
003 02 150256000
003 03 150346000
003 04 150456000
003 05 150476000
003 06 150496000
003 07 150436000
003 08 150376000
003 09 150276000
003 10 150286000
003 11 160126000
003 12 050155000
003 13 050244000
003 14 050215000
003 15 050145000
003 16 050075000
003 17 160177000
003 18 150247000
003 19 160217000
003 20 140157000
003 21 150257000
003 22 110257000
003 23 130187000
003 24 150177000
004 01 160217000
004 02 160247000
004 03 160257000
004 04 030097000
004 05 100247000
004 06 100157000
004 07 150127000
004 08 150127000
004 09 150207000
004 10 150227000
004 11 130106000
004 12 110145000
004 13 100255000
004 14 100524000
004 15 100514000
004 16 100544000
004 17 100514000
004 18 110324000
004 19 110244000
004 20 100344000
004 21 120324000
004 22 120174000
004 23 130244000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-67	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

004 24 130254000
005 01 120374000
005 02 120344000
005 03 120274000
005 04 110294000
005 05 100304000
005 06 110364000
005 07 100304000
005 08 110294002
005 09 100174000
005 10 090214001
005 11 090124007
005 12 080164003
005 13 150264002
005 14 080284000
005 15 090214002
005 16 080174002
005 17 080224002
005 18 080215000
005 19 080255000
005 20 080245000
005 21 080285000
005 22 070305000
005 23 070375000
005 24 070445000
006 01 070595000
006 02 070665000
006 03 070615000
006 04 070465000
006 05 060295000
006 06 060355000
006 07 060285000
006 08 060325000
006 09 060374000
006 10 070494000
006 11 070643000
006 12 060672000
006 13 060602000
006 14 050623000
006 15 050634000
006 16 050614000
006 17 060714000
006 18 060804000
006 19 060764000
006 20 070754000
006 21 070714000
006 22 070684000
006 23 060644000
006 24 060624000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-68	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

007 01 060634000
007 02 060624000
007 03 060634000
007 04 060544000
007 05 060704000
007 06 060604000
007 07 060674000
007 08 050664000
007 09 050694000
007 10 050763000
007 11 050813000
007 12 050762000
007 13 050742000
007 14 050763000
007 15 060663000
007 16 060684000
007 17 060654000
007 18 060604000
007 19 050664000
007 20 060554000
007 21 050544000
007 22 050604000
007 23 050434000
007 24 040364000
008 01 040394000
008 02 030444000
008 03 040414000
008 04 050454000
008 05 050444000
008 06 050444000
008 07 050474000
008 08 050414000
008 09 040524000
008 10 040614000
008 11 050562000
008 12 050533000
008 13 060483000
008 14 050474000
008 15 050394000
008 16 040374000
008 17 030324000
008 18 040314000
008 19 030344000
008 20 030274000
008 21 030254000
008 22 030214000
008 23 030304000
008 24 030314000
009 01 060154000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-69	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

009 02 070224000
 009 03 070174000
 009 04 070264000
 009 05 070304000
 009 06 070294000
 009 07 060254000
 009 08 070284000
 009 09 080284000
 009 10 100424000
 009 11 100493000
 009 12 100622000
 009 13 100552000
 009 14 100463000
 009 15 090464000
 009 16 090424000
 009 17 090374000
 009 18 100335000
 009 19 100395000
 009 20 090424000
 009 21 090454000
 009 22 090474000
 009 23 100464000
 009 24 090504000
 010 01 090474000
 010 02 090494000
 010 03 090564000
 010 04 090484000
 010 05 090514000
 010 06 090564000
 010 07 090504000
 010 08 090534000
 010 09 090634000
 010 10 090584000
 010 11 080552000
 010 12 090492000
 010 13 090492000
 010 14 080492000
 010 15 080483000
 010 16 080454000
 010 17 080384000
 010 18 070405000
 010 19 070405000
 010 20 070395000
 010 21 070375000
 010 22 080395000
 010 23 100255000
 010 24 100225000
 011 01 100305000
 011 02 100255000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-70	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

011 03 090225000
 011 04 070295000
 011 05 070295000
 011 06 070265000
 011 07 070195000
 011 08 060214000
 011 09 050244000
 011 10 040303000
 011 11 040353000
 011 12 040342000
 011 13 040323000
 011 14 030372000
 011 15 030423000
 011 16 030474000
 011 17 030534000
 011 18 030484000
 011 19 020424000
 011 20 020544000
 011 21 020564000
 011 22 020574000
 011 23 020554000
 011 24 020604000
 012 01 020574000
 012 02 020444000
 012 03 020494000
 012 04 020424000
 012 05 030444000
 012 06 030454000
 012 07 030394000
 012 08 030354000
 012 09 030384000
 012 10 030364000
 012 11 030264000
 012 12 030234000
 012 13 030174000
 012 14 040224000
 012 15 040135000
 012 16 040105000
 012 17 050215000
 012 18 050275000
 012 19 050255000
 012 20 050365000
 012 21 050305000
 012 22 050265000
 012 23 060255000
 012 24 070295000
 013 01 060255000
 013 02 060185000
 013 03 030195000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-71	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

013 04 020186000
013 05 020216000
013 06 020226000
013 07 030295000
013 08 030295000
013 09 030335000
013 10 040424000
013 11 050384000
013 12 050524001
013 13 050594000
013 14 060574000
013 15 070494000
013 16 060464000
013 17 060485000
013 18 070665000
013 19 070635000
013 20 070605000
013 21 070705000
013 22 080605000
013 23 080784000
013 24 070704000
014 01 080574000
014 02 080475000
014 03 080485000
014 04 080435000
014 05 080405000
014 06 100195000
014 07 110245000
014 08 110215000
014 09 110254000
014 10 110294000
014 11 100353000
014 12 100313000
014 13 110184000
014 14 010174000
014 15 150204000
014 16 150204000
014 17 140244000
014 18 140264000
014 19 140434000
014 20 140484000
014 21 140514000
014 22 140384000
014 23 130304000
014 24 130254000
015 01 110274000
015 02 100354000
015 03 100454001
015 04 100524000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-72	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

015 05 100664000
015 06 100714000
015 07 090684000
015 08 090644000
015 09 090634000
015 10 090573000
015 11 080513000
015 12 080522000
015 13 070632000
015 14 070652000
015 15 070764000
015 16 080574000
015 17 070474000
015 18 070474000
015 19 080644000
015 20 080714000
015 21 080664000
015 22 070814000
015 23 070874000
015 24 070964000
016 01 070934000
016 02 070964000
016 03 060754000
016 04 060784000
016 05 060864000
016 06 060894000
016 07 060764000
016 08 060714000
016 09 060884000
016 10 060864000
016 11 060813000
016 12 070842000
016 13 060812000
016 14 070812000
016 15 070823000
016 16 070814000
016 17 070784000
016 18 060744000
016 19 060594000
016 20 060594000
016 21 060634000
016 22 070624000
016 23 070604000
016 24 070594000
017 01 070544000
017 02 070594000
017 03 070514000
017 04 070524000
017 05 070485000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-73	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

017 06 070434000
 017 07 070454000
 017 08 070404000
 017 09 070504000
 017 10 080463000
 017 11 070413000
 017 12 070343000
 017 13 070254000
 017 14 060263000
 017 15 050314000
 017 16 050274000
 017 17 040224000
 017 18 040234000
 017 19 040204000
 017 20 030204000
 017 21 040294000
 017 22 030314000
 017 23 020314001
 017 24 010354000
 018 01 010384001
 018 02 010484000
 018 03 010404002
 018 04 010454001
 018 05 010484000
 018 06 010424000
 018 07 010354000
 018 08 160295001
 018 09 150265002
 018 10 150275005
 018 11 150255007
 018 12 150165004
 018 13 140095002
 018 14 080174001
 018 15 080214002
 018 16 080224000
 018 17 080324001
 018 18 080345000
 018 19 070425000
 018 20 070615000
 018 21 070555000
 018 22 070755000
 018 23 070775000
 018 24 070764000
 019 01 070764000
 019 02 060584000
 019 03 060554000
 019 04 050574000
 019 05 050634000
 019 06 060564000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-74	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

019 07 060554000
019 08 060524000
019 09 060604000
019 10 060724000
019 11 060743000
019 12 070753000
019 13 070732000
019 14 060723000
019 15 060753000
019 16 060764000
019 17 060694000
019 18 070544000
019 19 060624000
019 20 060564000
019 21 060604000
019 22 060594000
019 23 060614000
019 24 050634000
020 01 050594000
020 02 050554000
020 03 050494000
020 04 060454000
020 05 060464000
020 06 060474000
020 07 060384000
020 08 060384000
020 09 060454000
020 10 060694000
020 11 070793000
020 12 070822000
020 13 070852000
020 14 070862000
020 15 070783000
020 16 070774000
020 17 070704000
020 18 070664000
020 19 060564000
020 20 060514000
020 21 060514000
020 22 070554000
020 23 070554000
020 24 070594000
021 01 070544000
021 02 070544000
021 03 070504000
021 04 070534000
021 05 070474000
021 06 070425000
021 07 070414000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-75	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

021 08 070444000
021 09 070454000
021 10 070463000
021 11 080463000
021 12 070382000
021 13 060392000
021 14 060422000
021 15 060384000
021 16 040444000
021 17 050374000
021 18 050304000
021 19 050254000
021 20 050225000
021 21 030254000
021 22 030305000
021 23 020285000
021 24 020375000
022 01 010395000
022 02 010465000
022 03 020325000
022 04 020305000
022 05 030324000
022 06 030334000
022 07 030344000
022 08 030334000
022 09 020424000
022 10 030374000
022 11 030314000
022 12 030424000
022 13 040375000
022 14 040334000
022 15 040344000
022 16 050514000
022 17 050475000
022 18 060605000
022 19 060605000
022 20 070705000
022 21 070734000
022 22 080724000
022 23 080714000
022 24 080754000
023 01 070794000
023 02 070724000
023 03 070604000
023 04 070634000
023 05 070544000
023 06 070524000
023 07 070514000
023 08 070394000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-76	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

023 09 070634000
023 10 060763000
023 11 060732000
023 12 070791000
023 13 070691000
023 14 060751000
023 15 060672000
023 16 060633000
023 17 060514000
023 18 070354000
023 19 070235000
023 20 070255000
023 21 070274000
023 22 080304000
023 23 080344000
023 24 100284000
024 01 110164000
024 02 110124000
024 03 130084000
024 04 130084000
024 05 120124000
024 06 120114000
024 07 120094000
024 08 120084000
024 09 100184000
024 10 100274000
024 11 090324000
024 12 080414000
024 13 080384000
024 14 070423000
024 15 070534000
024 16 070594000
024 17 070514000
024 18 070385000
024 19 070345000
024 20 060415000
024 21 070565000
024 22 070555000
024 23 080585000
024 24 080455000
025 01 080595000
025 02 080584000
025 03 080485000
025 04 070445000
025 05 070324000
025 06 070414000
025 07 070394000
025 08 080315000
025 09 070344000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-77	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

025 10 080433000
 025 11 080413000
 025 12 090373000
 025 13 100274000
 025 14 080214000
 025 15 060214000
 025 16 060184000
 025 17 070134000
 025 18 080104000
 025 19 100144000
 025 20 120134000
 025 21 120214000
 025 22 120244001
 025 23 110214000
 025 24 120154003
 026 01 120184003
 026 02 110304002
 026 03 110364004
 026 04 110454001
 026 05 110454002
 026 06 100474000
 026 07 110484000
 026 08 110464000
 026 09 110494000
 026 10 110514000
 026 11 110534000
 026 12 110614000
 026 13 110554000
 026 14 120504000
 026 15 110434000
 026 16 110474000
 026 17 110464000
 026 18 110464000
 026 19 110464000
 026 20 100464000
 026 21 110424000
 026 22 110414000
 026 23 110404000
 026 24 100434000
 027 01 100434000
 027 02 100494000
 027 03 100474000
 027 04 110454000
 027 05 100424000
 027 06 100434000
 027 07 100384000
 027 08 110374000
 027 09 110434000
 027 10 100434000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-78	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

027 11 110444000
027 12 110394000
027 13 100444000
027 14 100394000
027 15 100364000
027 16 110324000
027 17 110374000
027 18 110424000
027 19 110424006
027 20 080434006
027 21 070654005
027 22 080674000
027 23 090554000
027 24 090394000
028 01 070404000
028 02 070374000
028 03 070444000
028 04 060424000
028 05 060424000
028 06 050414000
028 07 050394000
028 08 040454000
028 09 050524000
028 10 050604000
028 11 060764000
028 12 060764000
028 13 060834000
028 14 060874000
028 15 060844000
028 16 060804000
028 17 060764000
028 18 060654000
028 19 060634000
028 20 050485000
028 21 050475000
028 22 050425000
028 23 050375000
028 24 040405000
029 01 040345000
029 02 030345000
029 03 030345000
029 04 030395000
029 05 030405000
029 06 040355000
029 07 040355000
029 08 040375000
029 09 030355000
029 10 040484000
029 11 050584000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-79	of J-243

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

Prepared by		Date	
Reviewed by		Date	
Approved by		Date	

- 029 12 050583000
- 029 13 070523000
- 029 14 080472000
- 029 15 070443000
- 029 16 070404000
- 029 17 080364000
- 029 18 080385000
- 029 19 080375000
- 029 20 080475000
- 029 21 080345000
- 029 22 080364000
- 029 23 080424000
- 029 24 080404000
- 030 01 080314000
- 030 02 080274000
- 030 03 070404000
- 030 04 070384000
- 030 05 070354000
- 030 06 070404000
- 030 07 070384000
- 030 08 070304000
- 030 09 070334000
- 030 10 070444000
- 030 11 070554000
- 030 12 060461000
- 030 13 070632000
- 030 14 070662000
- 030 15 060633000
- 030 16 060514000
- 030 17 060544000
- 030 18 060434000
- 030 19 060424000
- 030 20 060684000
- 030 21 060574000
- 030 22 060634000
- 030 23 060564000
- 030 24 060574000
- 031 01 060514000
- 031 02 060514000
- 031 03 060464000
- 031 04 060534000
- 031 05 050564000
- 031 06 050524000
- 031 07 050544000
- 031 08 050624000
- 031 09 060664000
- 031 10 060724000
- 031 11 060673000
- 031 12 060663000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-80	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

031 13 060642000
 031 14 060633000
 031 15 060673000
 031 16 060644000
 031 17 060634000
 031 18 070534000
 031 19 070495000
 031 20 070475000
 031 21 070525000
 031 22 070535000
 031 23 070504000
 031 24 060424000
 032 01 060425000
 032 02 060434000
 032 03 060375000
 032 04 060455000
 032 05 060445000
 032 06 050435000
 032 07 050425000
 032 08 060425000
 032 09 060384000
 032 10 070384000
 032 11 080443000
 032 12 080493000
 032 13 070393000
 032 14 070363000
 032 15 070353000
 032 16 070384000
 032 17 060324000
 032 18 070355000
 032 19 060385000
 032 20 060385000
 032 21 070316000
 032 22 070296000
 032 23 080286000
 032 24 070276000
 033 01 070286000
 033 02 070306000
 033 03 080286000
 033 04 070245000
 033 05 090296000
 033 06 100346000
 033 07 100347000
 033 08 110287000
 033 09 100276000
 033 10 110304000
 033 11 110274000
 033 12 100174000
 033 13 040244000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-81	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

033 14 020164000
 033 15 160175000
 033 16 010135000
 033 17 150095000
 033 18 150175000
 033 19 140226000
 033 20 140215000
 033 21 160175000
 033 22 140215000
 033 23 140146000
 033 24 120236000
 034 01 110236000
 034 02 110187000
 034 03 090257000
 034 04 090266000
 034 05 100286000
 034 06 110306000
 034 07 110336000
 034 08 110305000
 034 09 110285000
 034 10 130234000
 034 11 120215006
 034 12 120255007
 034 13 130445012
 034 14 140725013
 034 15 150955004
 034 16 160716000
 034 17 040335000
 034 18 040415000
 034 19 040445000
 034 20 040365000
 034 21 040415000
 034 22 040425000
 034 23 040395000
 034 24 040435000
 035 01 050445000
 035 02 050525000
 035 03 050455000
 035 04 050375000
 035 05 050315000
 035 06 040305000
 035 07 060245000
 035 08 050155000
 035 09 040305000
 035 10 050314000
 035 11 070624000
 035 12 070674000
 035 13 070633000
 035 14 070613000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-82	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

035 15 070593000
035 16 070554000
035 17 070454000
035 18 070385000
035 19 070245000
035 20 060315000
035 21 060255000
035 22 060365000
035 23 060425000
035 24 070355000
036 01 070285000
036 02 080305000
036 03 080215000
036 04 070205000
036 05 070135000
036 06 070185000
036 07 070205000
036 08 080165000
036 09 100324000
036 10 100414000
036 11 100404000
036 12 090284000
036 13 090264000
036 14 080234000
036 15 080204000
036 16 080164000
036 17 100114000
036 18 130104000
036 19 110175000
036 20 120175000
036 21 120175000
036 22 120224000
036 23 120134000
036 24 130155001
037 01 120235001
037 02 150194000
037 03 130224001
037 04 130214003
037 05 130264005
037 06 120255004
037 07 120275000
037 08 120355000
037 09 120265002
037 10 130255000
037 11 160545002
037 12 070355012
037 13 100385007
037 14 140286016
037 15 160176025



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-83	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

037 16 040076015
037 17 150105014
037 18 150125011
037 19 090105023
037 20 140186013
037 21 160356004
037 22 070295001
037 23 090105003
037 24 060145000
038 01 070265000
038 02 080276000
038 03 060195001
038 04 060205000
038 05 060185000
038 06 060425000
038 07 050405000
038 08 060255000
038 09 050225000
038 10 060244000
038 11 060414000
038 12 060504000
038 13 060604000
038 14 070584000
038 15 070654000
038 16 060634000
038 17 060634000
038 18 060545000
038 19 050455000
038 20 050515000
038 21 060554000
038 22 070564000
038 23 070634000
038 24 070595000
039 01 070545000
039 02 070555000
039 03 070565000
039 04 070604000
039 05 070634000
039 06 070624000
039 07 070594000
039 08 070674000
039 09 070694000
039 10 070683000
039 11 070662000
039 12 070601000
039 13 070611000
039 14 070591000
039 15 060512000
039 16 060433000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-84	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

039 17 060434000
039 18 050344000
039 19 050295000
039 20 040285000
039 21 020325000
039 22 010395000
039 23 010385000
039 24 010305000
040 01 020285000
040 02 020305000
040 03 010355000
040 04 010424000
040 05 020515000
040 06 010535000
040 07 020564000
040 08 020564000
040 09 020614000
040 10 020544000
040 11 020484000
040 12 030694000
040 13 030595000
040 14 020585000
040 15 030565000
040 16 020485000
040 17 030375000
040 18 020295000
040 19 010296000
040 20 010186000
040 21 160326000
040 22 160366000
040 23 020296000
040 24 030285000
041 01 030255000
041 02 030225000
041 03 040215000
041 04 040305000
041 05 030236000
041 06 040255000
041 07 050215000
041 08 060136000
041 09 040196000
041 10 050145000
041 11 040265000
041 12 040314000
041 13 040373000
041 14 050394000
041 15 050334000
041 16 060435000
041 17 050234000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-85	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

041 18 030205000
041 19 010136000
041 20 160166000
041 21 150177000
041 22 030186000
041 23 050225000
041 24 060256000
042 01 060355000
042 02 050285000
042 03 060255000
042 04 060265000
042 05 060385000
042 06 070375000
042 07 080455000
042 08 080405000
042 09 070514000
042 10 070603000
042 11 070622000
042 12 070661000
042 13 070561000
042 14 070531000
042 15 070512000
042 16 060494000
042 17 060394000
042 18 070315000
042 19 070265000
042 20 060115000
042 21 080105000
042 22 110065000
042 23 150096000
042 24 140075000
043 01 140126000
043 02 010095000
043 03 030125000
043 04 050155000
043 05 040215000
043 06 040175000
043 07 030095000
043 08 020055000
043 09 110055000
043 10 120045000
043 11 160104000
043 12 160244000
043 13 150244000
043 14 150244000
043 15 150335000
043 16 150335000
043 17 150275000
043 18 150286000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-86	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

043 19 150346000
 043 20 160266000
 043 21 010225000
 043 22 020305000
 043 23 020355000
 043 24 030305000
 044 01 030255000
 044 02 030305000
 044 03 040345000
 044 04 040345000
 044 05 040255000
 044 06 050215000
 044 07 050325000
 044 08 060335000
 044 09 070424000
 044 10 070553000
 044 11 060502000
 044 12 060501000
 044 13 050511000
 044 14 050562000
 044 15 050562000
 044 16 050544000
 044 17 050514000
 044 18 040305000
 044 19 040285000
 044 20 040305000
 044 21 030296000
 044 22 020236000
 044 23 030236000
 044 24 030286000
 045 01 030276000
 045 02 030246000
 045 03 030256000
 045 04 040306000
 045 05 040326000
 045 06 030316000
 045 07 030285000
 045 08 040346000
 045 09 050395000
 045 10 040425000
 045 11 060594000
 045 12 060623000
 045 13 060563000
 045 14 060614000
 045 15 060454000
 045 16 060424000
 045 17 050375000
 045 18 060315000
 045 19 050175000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-87	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

045 20 040125000
045 21 060055000
045 22 100065000
045 23 110207000
045 24 090306000
046 01 100196000
046 02 100306000
046 03 100255000
046 04 080225000
046 05 080225000
046 06 080255000
046 07 080326000
046 08 090295000
046 09 100594000
046 10 100663000
046 11 100642000
046 12 100551000
046 13 090531000
046 14 080471000
046 15 100432000
046 16 100423000
046 17 110434000
046 18 110375000
046 19 110305000
046 20 100365000
046 21 100355000
046 22 100335000
046 23 100335000
046 24 100425000
047 01 100515000
047 02 100475000
047 03 100425000
047 04 100345000
047 05 100245000
047 06 090315000
047 07 090325000
047 08 090434000
047 09 100574000
047 10 100462000
047 11 090422000
047 12 080382000
047 13 080441000
047 14 080431000
047 15 080382000
047 16 080283000
047 17 080244000
047 18 090104000
047 19 110164000
047 20 070165000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-88	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

047 21 070265000
047 22 090195000
047 23 120095000
047 24 130105000
048 01 120166000
048 02 130126000
048 03 100137000
048 04 110217000
048 05 120177000
048 06 110217000
048 07 110236000
048 08 110206000
048 09 110255000
048 10 120314000
048 11 130322000
048 12 130312000
048 13 160214000
048 14 160174000
048 15 130243000
048 16 140114000
048 17 110134000
048 18 090145000
048 19 120195000
048 20 130224000
048 21 120224000
048 22 110294000
048 23 110314000
048 24 100334000
049 01 100354000
049 02 100344000
049 03 100354000
049 04 100294000
049 05 090344000
049 06 090355000
049 07 090365000
049 08 090455000
049 09 090604000
049 10 090613000
049 11 090602000
049 12 080571000
049 13 080571000
049 14 080551000
049 15 080592000
049 16 070673000
049 17 070604000
049 18 070595000
049 19 070555000
049 20 070535000
049 21 070395000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-89	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

049 22 060405000
049 23 060325000
049 24 060385000
050 01 060315000
050 02 050175000
050 03 060245000
050 04 050225000
050 05 040305000
050 06 040325000
050 07 040305000
050 08 040365000
050 09 040415000
050 10 050374000
050 11 050493000
050 12 050531000
050 13 060551000
050 14 070602000
050 15 070632000
050 16 070594000
050 17 070524000
050 18 080355000
050 19 080276000
050 20 080326000
050 21 090306000
050 22 090216000
050 23 110317000
050 24 160167000
051 01 010166000
051 02 120117000
051 03 140166000
051 04 140196000
051 05 110206000
051 06 140175000
051 07 130155000
051 08 130085000
051 09 140175000
051 10 140304000
051 11 150234000
051 12 160285000
051 13 150504000
051 14 150623000
051 15 150595000
051 16 150594000
051 17 140614000
051 18 140575000
051 19 140465000
051 20 140365000
051 21 140305000
051 22 120175000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-90	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

051 23 100256000
051 24 110206000
052 01 090217000
052 02 090257000
052 03 100227000
052 04 100217000
052 05 090197000
052 06 100217000
052 07 090237000
052 08 070197000
052 09 070256000
052 10 060235000
052 11 070424000
052 12 070602000
052 13 060933000
052 14 050864000
052 15 050794000
052 16 060894000
052 17 060804000
052 18 060854000
052 19 060704000
052 20 060724000
052 21 060694000
052 22 060664000
052 23 060634000
052 24 060634000
053 01 060654000
053 02 070645000
053 03 060544000
053 04 060464000
053 05 060584000
053 06 070634000
053 07 070465000
053 08 060394000
053 09 060474000
053 10 070633000
053 11 070642000
053 12 070701000
053 13 070701000
053 14 070671000
053 15 070672000
053 16 070633000
053 17 070564000
053 18 070445000
053 19 070395000
053 20 060365000
053 21 060315000
053 22 060315000
053 23 060365000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-91	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

053 24 060465000
054 01 070345000
054 02 070325000
054 03 070306000
054 04 080286000
054 05 080265000
054 06 080285000
054 07 080285000
054 08 070235000
054 09 080324000
054 10 080373000
054 11 080353000
054 12 080283000
054 13 050282000
054 14 040223000
054 15 020184000
054 16 020154000
054 17 030254000
054 18 040255000
054 19 010155000
054 20 160165000
054 21 160175000
054 22 140116000
054 23 150186000
054 24 150186000
055 01 140236000
055 02 150215000
055 03 160175000
055 04 150115000
055 05 120166000
055 06 130166000
055 07 130096000
055 08 120076000
055 09 070065000
055 10 160175000
055 11 130164000
055 12 130154000
055 13 160164000
055 14 160144000
055 15 080154000
055 16 090244000
055 17 090314000
055 18 100354001
055 19 100344000
055 20 100344000
055 21 090324000
055 22 090285000
055 23 080345000
055 24 080435000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-92	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

056 01 080505000
056 02 080635000
056 03 080695000
056 04 090735000
056 05 090695000
056 06 090515000
056 07 080545000
056 08 080444000
056 09 080554000
056 10 080582000
056 11 080621000
056 12 080661000
056 13 080641000
056 14 090651000
056 15 090622000
056 16 090593000
056 17 090484000
056 18 090445000
056 19 090385000
056 20 090335000
056 21 090296000
056 22 090355000
056 23 090345000
056 24 090295000
057 01 090305000
057 02 090325000
057 03 090305000
057 04 090345000
057 05 100336000
057 06 100345000
057 07 100315000
057 08 100335000
057 09 100474000
057 10 110383000
057 11 100303000
057 12 100293000
057 13 100254000
057 14 080323000
057 15 080214000
057 16 100134000
057 17 090124000
057 18 070134000
057 19 080245000
057 20 080225000
057 21 080285000
057 22 080256000
057 23 090206000
057 24 110276000
058 01 100325000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-93	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

058 02 100315000
058 03 100385000
058 04 100455000
058 05 100425000
058 06 100385000
058 07 100495000
058 08 100464000
058 09 110524000
058 10 110612000
058 11 110611000
058 12 100571000
058 13 100541000
058 14 100511000
058 15 100562000
058 16 100503000
058 17 100344000
058 18 090155000
058 19 080235000
058 20 070236000
058 21 080346000
058 22 090346000
058 23 090316000
058 24 080326000
059 01 090326000
059 02 090336000
059 03 080325000
059 04 080315000
059 05 080335000
059 06 080286000
059 07 080266000
059 08 080255000
059 09 080364000
059 10 080373000
059 11 080362000
059 12 080332000
059 13 060252000
059 14 050302000
059 15 060402000
059 16 070383000
059 17 050344000
059 18 050255000
059 19 060256000
059 20 050305000
059 21 050216000
059 22 050166000
059 23 050087000
059 24 050177000
060 01 060207000
060 02 050347000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-94	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

060 03 050317000
060 04 040127000
060 05 060157000
060 06 070127000
060 07 050177000
060 08 040177000
060 09 040136000
060 10 040185000
060 11 040304000
060 12 050422000
060 13 050451000
060 14 050422000
060 15 050433000
060 16 040374000
060 17 040325000
060 18 050305000
060 19 040336000
060 20 050266000
060 21 040307000
060 22 040267000
060 23 030207000
060 24 030117000
061 01 050077000
061 02 040117000
061 03 050127000
061 04 140057000
061 05 130077000
061 06 160107000
061 07 160137000
061 08 010097000
061 09 160167000
061 10 150235000
061 11 160265000
061 12 150276000
061 13 150365000
061 14 150345000
061 15 150406000
061 16 150456000
061 17 150397000
061 18 150297000
061 19 160237000
061 20 150287000
061 21 150306000
061 22 150427000
061 23 150307000
061 24 150367000
062 01 150347000
062 02 150457000
062 03 150427000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-95	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

062 04 160397000
062 05 030516000
062 06 030326000
062 07 020366003
062 08 020536002
062 09 020476000
062 10 020435000
062 11 030475000
062 12 030465000
062 13 030396000
062 14 040345000
062 15 030426000
062 16 030396000
062 17 030456000
062 18 040386000
062 19 040426000
062 20 050326000
062 21 060256000
062 22 070366000
062 23 080406000
062 24 080356000
063 01 080445000
063 02 080435000
063 03 080395000
063 04 070305000
063 05 050315000
063 06 050185000
063 07 050395000
063 08 050336000
063 09 050354000
063 10 050352000
063 11 060342000
063 12 070411000
063 13 070541000
063 14 070461000
063 15 070363000
063 16 060343000
063 17 090284000
063 18 080186000
063 19 090186000
063 20 090126000
063 21 100175000
063 22 150216000
063 23 150247000
063 24 150257000
064 01 150227000
064 02 140197000
064 03 150246000
064 04 150276000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-96	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

064 05 150287000
 064 06 140296000
 064 07 110195000
 064 08 100215000
 064 09 110244000
 064 10 110224000
 064 11 100214000
 064 12 100294000
 064 13 090313000
 064 14 080314000
 064 15 080244000
 064 16 090284000
 064 17 100274000
 064 18 110234000
 064 19 130145000
 064 20 130185000
 064 21 120274000
 064 22 140215000
 064 23 150256000
 064 24 160256000
 065 01 160285000
 065 02 160405000
 065 03 140215000
 065 04 130115000
 065 05 120145000
 065 06 130174000
 065 07 140264000
 065 08 150345000
 065 09 160345000
 065 10 160355000
 065 11 150255000
 065 12 160275000
 065 13 150225000
 065 14 010124000
 065 15 010134000
 065 16 030165000
 065 17 150216000
 065 18 150277000
 065 19 160407000
 065 20 150487000
 065 21 150357000
 065 22 020626000
 065 23 030756000
 065 24 030736000
 066 01 040476000
 066 02 040406000
 066 03 040335004
 066 04 060345002
 066 05 070155016



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-97	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

066 06 010175021
066 07 160346031
066 08 160547009
066 09 160527002
066 10 150637003
066 11 150807000
066 12 020607000
066 13 040505040
066 14 040515000
066 15 040395000
066 16 050554000
066 17 070805000
066 18 050625000
066 19 050705000
066 20 060715000
066 21 070675000
066 22 070675000
066 23 070595000
066 24 070535000
067 01 070525000
067 02 070425000
067 03 070315000
067 04 070355000
067 05 070485000
067 06 070345000
067 07 050215000
067 08 050185000
067 09 060274000
067 10 070343000
067 11 050263000
067 12 010223000
067 13 010184000
067 14 160344000
067 15 150515000
067 16 150635000
067 17 150674000
067 18 150564000
067 19 150515000
067 20 150555000
067 21 010615001
067 22 070554004
067 23 090494000
067 24 080265000
068 01 080265000
068 02 070354000
068 03 060504000
068 04 060574000
068 05 060514000
068 06 060464000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-98	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

068 07 060494000
 068 08 060514000
 068 09 070634000
 068 10 070743000
 068 11 070672000
 068 12 070664000
 068 13 070573000
 068 14 070534000
 068 15 070634000
 068 16 070474000
 068 17 100445001
 068 18 100335001
 068 19 120135000
 068 20 120155000
 068 21 080335000
 068 22 080435000
 068 23 090215000
 068 24 070434000
 069 01 070374000
 069 02 070344000
 069 03 070284000
 069 04 070314000
 069 05 080324000
 069 06 100174000
 069 07 160054000
 069 08 080144000
 069 09 070254000
 069 10 060224000
 069 11 060214000
 069 12 010204000
 069 13 010203000
 069 14 010194000
 069 15 010242000
 069 16 030214000
 069 17 080154000
 069 18 110164000
 069 19 110185000
 069 20 110285000
 069 21 120225000
 069 22 120185000
 069 23 130185000
 069 24 110255000
 070 01 110285000
 070 02 110335000
 070 03 110345000
 070 04 110344000
 070 05 110384000
 070 06 110454000
 070 07 110414000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-99	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

070 08 110384000
070 09 110494000
070 10 110614000
070 11 110644000
070 12 110713000
070 13 110693000
070 14 110703000
070 15 110672000
070 16 100713000
070 17 100704000
070 18 100604000
070 19 100485000
070 20 090385000
070 21 090475000
070 22 090415000
070 23 090425000
070 24 090445000
071 01 080465000
071 02 080465000
071 03 080525000
071 04 090595000
071 05 080495000
071 06 080465000
071 07 080445000
071 08 070434000
071 09 080513000
071 10 080542000
071 11 090402000
071 12 070331000
071 13 050421000
071 14 050382000
071 15 040372000
071 16 040353000
071 17 040344000
071 18 030275000
071 19 020315000
071 20 020325000
071 21 010335000
071 22 160335000
071 23 160365000
071 24 160315000
072 01 050215000
072 02 030225000
072 03 020186000
072 04 030296000
072 05 030346000
072 06 050515000
072 07 060445000
072 08 060904000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-100	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

072 09 060884000
072 10 060872000
072 11 060761000
072 12 060721000
072 13 050721000
072 14 050681000
072 15 050651000
072 16 050682000
072 17 050674000
072 18 060554000
072 19 060484000
072 20 060355000
072 21 080465000
072 22 080645000
072 23 080595000
072 24 070584000
073 01 070674000
073 02 070704000
073 03 060574000
073 04 070554000
073 05 060484000
073 06 070584000
073 07 070574000
073 08 070664000
073 09 070704000
073 10 070781000
073 11 070661000
073 12 070661000
073 13 070701000
073 14 070671000
073 15 070661000
073 16 070672000
073 17 070614000
073 18 070504000
073 19 070385000
073 20 060355000
073 21 060305000
073 22 060385000
073 23 070335000
073 24 080266000
074 01 100206000
074 02 100316000
074 03 110246000
074 04 100216000
074 05 120276000
074 06 120195000
074 07 130156000
074 08 130185000
074 09 140254000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-101	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

074 10 150422000
074 11 150522000
074 12 150621000
074 13 150692000
074 14 150793000
074 15 150802000
074 16 150823000
074 17 150804000
074 18 150744000
074 19 150694000
074 20 150655000
074 21 150665000
074 22 160634000
074 23 160625000
074 24 160515000
075 01 010265000
075 02 020106000
075 03 050335000
075 04 040325000
075 05 040306000
075 06 040315000
075 07 030305000
075 08 040295000
075 09 050184000
075 10 040283000
075 11 050492000
075 12 050501000
075 13 050511000
075 14 050541000
075 15 040491000
075 16 050463000
075 17 050374000
075 18 050305000
075 19 040266000
075 20 050115000
075 21 070176000
075 22 110177000
075 23 130147000
075 24 140126000
076 01 110196000
076 02 110346000
076 03 110385000
076 04 100345000
076 05 100365000
076 06 110424000
076 07 110625002
076 08 110584007
076 09 120574003
076 10 120524004



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-102	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

076 11 120554001
076 12 110584009
076 13 110634003
076 14 110594008
076 15 110464015
076 16 100494014
076 17 110644002
076 18 110544000
076 19 110434000
076 20 090414001
076 21 100424000
076 22 110404000
076 23 110364000
076 24 110374000
077 01 100254000
077 02 090204000
077 03 100294000
077 04 100294000
077 05 100244000
077 06 100184000
077 07 100254000
077 08 110294000
077 09 110254000
077 10 110194000
077 11 120084000
077 12 010124000
077 13 030134000
077 14 080194000
077 15 090164000
077 16 110204000
077 17 110214000
077 18 120184000
077 19 120154000
077 20 120174000
077 21 120134000
077 22 130134001
077 23 120124000
077 24 140154000
078 01 130134001
078 02 130145000
078 03 120125000
078 04 030174000
078 05 100095000
078 06 060094000
078 07 040274000
078 08 050284000
078 09 050234000
078 10 040302000
078 11 040233000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-103	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

078 12 030252000
078 13 040331000
078 14 010303000
078 15 160423000
078 16 150462000
078 17 150584000
078 18 150584000
078 19 150584000
078 20 150514000
078 21 150464000
078 22 130274000
078 23 120304000
078 24 120314003
079 01 130344010
079 02 120254014
079 03 130304001
079 04 110334002
079 05 100464001
079 06 100514003
079 07 100515004
079 08 100645001
079 09 090594000
079 10 090564000
079 11 090564000
079 12 090614000
079 13 090583000
079 14 090562000
079 15 090463000
079 16 080394000
079 17 080344000
079 18 080324000
079 19 070385000
079 20 080265000
079 21 090245000
079 22 110185000
079 23 110205000
079 24 100245000
080 01 090215000
080 02 100215000
080 03 110175000
080 04 110155000
080 05 120066000
080 06 150115000
080 07 150165000
080 08 010254000
080 09 010414000
080 10 010483000
080 11 020553000
080 12 010613000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-104	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

080 13 010664000
080 14 010804000
080 15 010844000
080 16 010834000
080 17 020784000
080 18 010615000
080 19 010525000
080 20 160595000
080 21 150645000
080 22 160576000
080 23 010625000
080 24 030775000
081 01 030595000
081 02 040425000
081 03 050415000
081 04 060335000
081 05 060295000
081 06 070145000
081 07 080305000
081 08 070585000
081 09 070734000
081 10 060994000
081 11 070852000
081 12 070782000
081 13 070841000
081 14 070851000
081 15 060791000
081 16 070864000
081 17 070814000
081 18 070804000
081 19 070774000
081 20 070724000
081 21 070774000
081 22 070744000
081 23 070744000
081 24 070684000
082 01 070594000
082 02 070594000
082 03 070574000
082 04 070494000
082 05 070504000
082 06 070484000
082 07 070514000
082 08 080734000
082 09 080753000
082 10 080721000
082 11 080661000
082 12 080581000
082 13 070531000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-105	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

082 14 080551000
082 15 070561000
082 16 070592000
082 17 070583000
082 18 070514000
082 19 070385000
082 20 070305000
082 21 070275000
082 22 070315000
082 23 060375000
082 24 060375000
083 01 060375000
083 02 070355000
083 03 070295000
083 04 070315000
083 05 070265000
083 06 060105000
083 07 050154000
083 08 040254000
083 09 030303000
083 10 040381000
083 11 040431000
083 12 040491000
083 13 040521000
083 14 040551000
083 15 030571000
083 16 030632000
083 17 030554000
083 18 030544000
083 19 020524000
083 20 020534000
083 21 020564000
083 22 020504000
083 23 020464000
083 24 030314000
084 01 030295000
084 02 030255000
084 03 030345000
084 04 040345000
084 05 040235000
084 06 040145000
084 07 030235000
084 08 030175000
084 09 160214000
084 10 010155000
084 11 160326000
084 12 150466000
084 13 150555000
084 14 150635000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-106	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

084 15 150665000
084 16 150676000
084 17 150635000
084 18 150405000
084 19 150336000
084 20 160356000
084 21 160525000
084 22 160445000
084 23 160305000
084 24 130195000
085 01 140306002
085 02 150505001
085 03 160675001
085 04 160615000
085 05 160615000
085 06 160555000
085 07 160525000
085 08 160465000
085 09 150395000
085 10 150335000
085 11 150375000
085 12 150304000
085 13 150284000
085 14 150205000
085 15 160226000
085 16 160427000
085 17 160247000
085 18 160267000
085 19 150226000
085 20 140186000
085 21 140207000
085 22 150266000
085 23 150387000
085 24 150306000
086 01 140276000
086 02 150256000
086 03 150205000
086 04 150236000
086 05 150246000
086 06 150316000
086 07 150256000
086 08 150316000
086 09 150305000
086 10 160176000
086 11 150245000
086 12 150356000
086 13 150385000
086 14 150505000
086 15 150637000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-107	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

086 16 150557000
086 17 150467000
086 18 150437000
086 19 150427000
086 20 150407000
086 21 140417000
086 22 150477000
086 23 150567000
086 24 150507000
087 01 150437000
087 02 150437000
087 03 150397000
087 04 150327000
087 05 110146000
087 06 100096000
087 07 010116000
087 08 020156000
087 09 060205000
087 10 040175003
087 11 020146000
087 12 030255000
087 13 050404000
087 14 060384000
087 15 060304000
087 16 060254000
087 17 060234000
087 18 050245000
087 19 060245000
087 20 090306000
087 21 090316000
087 22 090306000
087 23 090305000
087 24 090346000
088 01 090385000
088 02 110465000
088 03 110524000
088 04 100295000
088 05 110305000
088 06 100185000
088 07 110115000
088 08 110314000
088 09 110424000
088 10 110552000
088 11 110533000
088 12 100492000
088 13 100461000
088 14 110432000
088 15 120354000
088 16 160375000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-108	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

088 17 160405000
088 18 150385000
088 19 120345000
088 20 130315000
088 21 120335000
088 22 120415000
088 23 120334000
088 24 120244000
089 01 120254000
089 02 120324000
089 03 110354000
089 04 110354000
089 05 120255000
089 06 120275000
089 07 120294000
089 08 120314000
089 09 120224000
089 10 120304000
089 11 120273000
089 12 130272000
089 13 140282000
089 14 030331000
089 15 160441000
089 16 160592000
089 17 010633000
089 18 010674000
089 19 150425000
089 20 140335000
089 21 140225000
089 22 140245000
089 23 130165000
089 24 120145000
090 01 120205000
090 02 120195000
090 03 120204000
090 04 130224000
090 05 120354000
090 06 110354000
090 07 110364000
090 08 110424000
090 09 110464000
090 10 120483000
090 11 120413000
090 12 120253000
090 13 120283000
090 14 120273000
090 15 120264000
090 16 120244000
090 17 110284000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-109	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

090 18 110344001
090 19 120274000
090 20 120304003
090 21 110304002
090 22 100284009
090 23 100224003
090 24 090264011
091 01 100304008
091 02 100384000
091 03 100464000
091 04 100464001
091 05 100314000
091 06 100284000
091 07 110214000
091 08 100194000
091 09 110234000
091 10 100284000
091 11 100294000
091 12 100294000
091 13 110304000
091 14 120214000
091 15 100174000
091 16 110234000
091 17 110224000
091 18 110214000
091 19 100244000
091 20 110284000
091 21 110184000
091 22 120114000
091 23 110204000
091 24 110314000
092 01 110314000
092 02 110174005
092 03 110314002
092 04 110474003
092 05 120474000
092 06 120384000
092 07 120414004
092 08 120384000
092 09 130534000
092 10 140744001
092 11 150702000
092 12 150664000
092 13 150564000
092 14 150564000
092 15 160634000
092 16 160893000
092 17 150864000
092 18 150564000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-110	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

092 19 140394000
092 20 140344000
092 21 140294000
092 22 130274000
092 23 130244000
092 24 130234000
093 01 120304000
093 02 120254000
093 03 130244000
093 04 120314000
093 05 120284000
093 06 120294000
093 07 120394000
093 08 120314001
093 09 130214007
093 10 120264004
093 11 120254005
093 12 120304003
093 13 110314001
093 14 120354000
093 15 120354000
093 16 120354000
093 17 120394000
093 18 120454000
093 19 110384000
093 20 110324000
093 21 110304001
093 22 110274001
093 23 110264002
093 24 110254000
094 01 110214000
094 02 110204000
094 03 110264001
094 04 110244006
094 05 110144006
094 06 110144001
094 07 110164000
094 08 090124000
094 09 090124000
094 10 080094000
094 11 060204000
094 12 050234000
094 13 060274000
094 14 060254000
094 15 070294000
094 16 060304000
094 17 060404000
094 18 050274000
094 19 040224000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-111	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

094 20 030204000
094 21 020165000
094 22 010215000
094 23 030215000
094 24 030225000
095 01 020316000
095 02 010385000
095 03 010445000
095 04 030254000
095 05 030185000
095 06 050195000
095 07 050594000
095 08 050504007
095 09 060394001
095 10 060614001
095 11 050694007
095 12 050734011
095 13 060714001
095 14 060784000
095 15 060894000
095 16 060984000
095 17 060874000
095 18 060854000
095 19 070854000
095 20 070954000
095 21 070934000
095 22 070744000
095 23 070604000
095 24 080634000
096 01 080704000
096 02 080624000
096 03 070654000
096 04 070684000
096 05 070804000
096 06 070804000
096 07 070764000
096 08 070764000
096 09 070804000
096 10 070882000
096 11 070921000
096 12 070871000
096 13 070941000
096 14 070901000
096 15 070871000
096 16 070941000
096 17 070912000
096 18 070824000
096 19 070884000
096 20 070774000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-112	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

096 21 070645000
096 22 070525000
096 23 070485000
096 24 070725000
097 01 070605000
097 02 070625000
097 03 070634000
097 04 070634000
097 05 060614000
097 06 060564000
097 07 060604000
097 08 060554000
097 09 060654000
097 10 070662000
097 11 070671000
097 12 060681000
097 13 070661000
097 14 060651000
097 15 060661000
097 16 060601000
097 17 060532000
097 18 070514000
097 19 070264000
097 20 060195000
097 21 040225000
097 22 040236000
097 23 050226000
097 24 050206000
098 01 040216000
098 02 030196000
098 03 020176000
098 04 020196000
098 05 020186000
098 06 020266000
098 07 010236000
098 08 010216000
098 09 160226000
098 10 040395000
098 11 040574000
098 12 040534000
098 13 050461000
098 14 050481000
098 15 050611000
098 16 050581000
098 17 050533000
098 18 060424000
098 19 070305000
098 20 080256000
098 21 070316000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-113	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

098 22 080376000
098 23 100385000
098 24 090305000
099 01 100216000
099 02 100255000
099 03 100285000
099 04 110275000
099 05 110245000
099 06 100235000
099 07 110155000
099 08 120135000
099 09 140124000
099 10 120154000
099 11 100164000
099 12 030144000
099 13 020194000
099 14 160234000
099 15 150344000
099 16 160364002
099 17 150254000
099 18 150164000
099 19 100114000
099 20 140284000
099 21 110155000
099 22 150075000
099 23 080125000
099 24 080255002
100 01 090155003
100 02 140405000
100 03 080264000
100 04 080235000
100 05 080235000
100 06 070175000
100 07 070184000
100 08 070214000
100 09 060304000
100 10 070424000
100 11 070394000
100 12 080402000
100 13 080331000
100 14 070461000
100 15 070521000
100 16 070522000
100 17 070522000
100 18 070514000
100 19 070484000
100 20 070375000
100 21 070316000
100 22 070326000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-114	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

100 23 070346000
100 24 060315000
101 01 060275000
101 02 070306000
101 03 070266000
101 04 090206000
101 05 110156000
101 06 030106000
101 07 050206000
101 08 050156000
101 09 070105000
101 10 060154000
101 11 030204000
101 12 020164000
101 13 160214000
101 14 160264000
101 15 160304000
101 16 160305000
101 17 160495000
101 18 150546000
101 19 150556000
101 20 150505000
101 21 150435000
101 22 150385000
101 23 160345000
101 24 150255000
102 01 140206000
102 02 150255000
102 03 140175000
102 04 120135000
102 05 110125000
102 06 150175000
102 07 110225000
102 08 100215000
102 09 100434000
102 10 110395002
102 11 110445000
102 12 110554000
102 13 110514000
102 14 110424000
102 15 100494000
102 16 110514000
102 17 110394000
102 18 100414000
102 19 100454000
102 20 100284000
102 21 100254000
102 22 100304000
102 23 100254000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-115	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

102 24 100224000
 103 01 100204000
 103 02 100294000
 103 03 110314000
 103 04 100214000
 103 05 100254000
 103 06 100304000
 103 07 110304000
 103 08 100334000
 103 09 110364001
 103 10 110504000
 103 11 120374000
 103 12 120404001
 103 13 120364003
 103 14 120364005
 103 15 120514004
 103 16 120524010
 103 17 120554011
 103 18 120554004
 103 19 120414013
 103 20 120634006
 103 21 120684002
 103 22 120734001
 103 23 120594008
 103 24 120494020
 104 01 120464004
 104 02 110384000
 104 03 110384000
 104 04 100354000
 104 05 100424000
 104 06 100434000
 104 07 110414000
 104 08 110384000
 104 09 110434000
 104 10 110464000
 104 11 110494000
 104 12 110394005
 104 13 120315000
 104 14 130234000
 104 15 150465000
 104 16 150726025
 104 17 150816008
 104 18 150716005
 104 19 150626087
 104 20 150535000
 104 21 160236000
 104 22 010266000
 104 23 020435000
 104 24 030585000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-116	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

105 01 040505000
 105 02 040344000
 105 03 040194000
 105 04 070254000
 105 05 070214000
 105 06 060234000
 105 07 110174000
 105 08 120154007
 105 09 070294010
 105 10 090494000
 105 11 090464001
 105 12 100514001
 105 13 080304043
 105 14 080404000
 105 15 080524000
 105 16 080504000
 105 17 080504012
 105 18 080614005
 105 19 080644000
 105 20 090644000
 105 21 090724001
 105 22 090694005
 105 23 090684001
 105 24 090634003
 106 01 090584000
 106 02 090614001
 106 03 090585000
 106 04 090455000
 106 05 090495000
 106 06 090585000
 106 07 080685000
 106 08 080784000
 106 09 090803000
 106 10 090902000
 106 11 090851000
 106 12 090821000
 106 13 080821000
 106 14 080811000
 106 15 090761000
 106 16 090712000
 106 17 090604000
 106 18 090534000
 106 19 090455000
 106 20 080315000
 106 21 080306000
 106 22 080345000
 106 23 080415000
 106 24 080425000
 107 01 090415000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-117	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

107 02 090325000
 107 03 090315000
 107 04 090286000
 107 05 090295000
 107 06 070265000
 107 07 090245000
 107 08 100324000
 107 09 080303000
 107 10 080283000
 107 11 050232000
 107 12 030262000
 107 13 030252000
 107 14 010213000
 107 15 160254000
 107 16 160355000
 107 17 150426000
 107 18 150476000
 107 19 150466000
 107 20 150415000
 107 21 150336000
 107 22 010335000
 107 23 020375000
 107 24 030305000
 108 01 030295000
 108 02 030265000
 108 03 010295000
 108 04 010305000
 108 05 010334000
 108 06 010344000
 108 07 010334000
 108 08 160274000
 108 09 150294000
 108 10 150305000
 108 11 150304000
 108 12 150365000
 108 13 150405000
 108 14 150426000
 108 15 150457000
 108 16 150337000
 108 17 150257000
 108 18 150337000
 108 19 160397000
 108 20 160367000
 108 21 150407000
 108 22 150357000
 108 23 150327000
 108 24 150317000
 109 01 150277000
 109 02 160186000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-118	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

109 03 020166000
 109 04 150066000
 109 05 150166000
 109 06 130116000
 109 07 160126000
 109 08 160105000
 109 09 070214000
 109 10 060213000
 109 11 050264000
 109 12 020214000
 109 13 020214000
 109 14 160225000
 109 15 150446000
 109 16 150587000
 109 17 150447000
 109 18 150507000
 109 19 150386000
 109 20 150296000
 109 21 150327000
 109 22 140256000
 109 23 110145000
 109 24 120106000
 110 01 120106000
 110 02 120106000
 110 03 130097000
 110 04 090227000
 110 05 090187000
 110 06 110147000
 110 07 150157000
 110 08 150226000
 110 09 020265000
 110 10 030295000
 110 11 010265000
 110 12 010306000
 110 13 010296000
 110 14 030426000
 110 15 020536000
 110 16 020726000
 110 17 020786000
 110 18 020627000
 110 19 020567000
 110 20 020527000
 110 21 030476000
 110 22 040396000
 110 23 040326000
 110 24 040387000
 111 01 050426000
 111 02 050456000
 111 03 050365000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-119	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

111 04 060335000
111 05 070245000
111 06 070325000
111 07 070345000
111 08 080494000
111 09 070532000
111 10 070502000
111 11 080511000
111 12 090451000
111 13 080392000
111 14 070361000
111 15 090322000
111 16 090252000
111 17 110154000
111 18 160575000
111 19 160625000
111 20 160675000
111 21 150515000
111 22 150464000
111 23 150434000
111 24 150544000
112 01 160414000
112 02 160304000
112 03 130175000
112 04 130215000
112 05 130214000
112 06 130175000
112 07 130244000
112 08 130402000
112 09 140451000
112 10 150553000
112 11 160705000
112 12 160735000
112 13 160715000
112 14 150635000
112 15 150694000
112 16 150634000
112 17 150614000
112 18 140564000
112 19 150464000
112 20 140314000
112 21 140304000
112 22 140214000
112 23 120175000
112 24 130165000
113 01 110176000
113 02 120136000
113 03 150246000
113 04 150286000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-120	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

113 05 090206000
 113 06 090196000
 113 07 120146000
 113 08 160216000
 113 09 010176000
 113 10 040284000
 113 11 050342000
 113 12 030243000
 113 13 160283000
 113 14 150345000
 113 15 150416000
 113 16 150366000
 113 17 150317000
 113 18 150177000
 113 19 150277000
 113 20 130177000
 113 21 100135000
 113 22 080235000
 113 23 090136000
 113 24 100175000
 114 01 160125000
 114 02 160075000
 114 03 130115000
 114 04 140136000
 114 05 100066000
 114 06 150056000
 114 07 150065000
 114 08 010105000
 114 09 040254000
 114 10 040263000
 114 11 050213000
 114 12 020214000
 114 13 020193000
 114 14 030204000
 114 15 010174000
 114 16 150415000
 114 17 130383000
 114 18 120424000
 114 19 120444000
 114 20 110364022
 114 21 120264019
 114 22 120294000
 114 23 120234000
 114 24 110164000
 115 01 100214000
 115 02 100154000
 115 03 100224000
 115 04 090294000
 115 05 100285000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-121	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

115 06 080234000
115 07 080314000
115 08 080354000
115 09 090413000
115 10 080452000
115 11 090461000
115 12 080551000
115 13 070631000
115 14 070571000
115 15 070581000
115 16 070522000
115 17 080443000
115 18 080384000
115 19 090305000
115 20 090246000
115 21 100155000
115 22 120076000
115 23 070206000
115 24 120306000
116 01 110286000
116 02 110125000
116 03 150125000
116 04 130095000
116 05 130175000
116 06 120295000
116 07 120265000
116 08 130393000
116 09 140441000
116 10 140481000
116 11 150561000
116 12 160674000
116 13 150583000
116 14 150723000
116 15 150734000
116 16 150724000
116 17 150734000
116 18 150764000
116 19 140614000
116 20 140504000
116 21 150664000
116 22 150764000
116 23 150684000
116 24 150634000
117 01 150504000
117 02 150525000
117 03 160315009
117 04 010385001
117 05 020405000
117 06 030555000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-122	of J-243

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

Prepared by		Date	
Reviewed by		Date	
Approved by		Date	

117 07 020555000
 117 08 020475000
 117 09 030425000
 117 10 030605000
 117 11 040605000
 117 12 030595000
 117 13 070635002
 117 14 090324000
 117 15 080224002
 117 16 120085005
 117 17 150104009
 117 18 150274003
 117 19 160294007
 117 20 010414010
 117 21 010344008
 117 22 030374003
 117 23 040374000
 117 24 040364000
 118 01 040394000
 118 02 040344000
 118 03 050314000
 118 04 040285000
 118 05 040285000
 118 06 040285000
 118 07 050254000
 118 08 050384000
 118 09 060423000
 118 10 060453000
 118 11 060441000
 118 12 050571000
 118 13 050521000
 118 14 050531000
 118 15 040461000
 118 16 050514000
 118 17 050604000
 118 18 060514000
 118 19 050445001
 118 20 070455000
 118 21 050534000
 118 22 060604000
 118 23 070804000
 118 24 070714000
 119 01 070794000
 119 02 070734000
 119 03 070724000
 119 04 070604000
 119 05 070664000
 119 06 070694000
 119 07 070754000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-123	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

119 08 070703000
 119 09 070731000
 119 10 070681000
 119 11 070651000
 119 12 060641000
 119 13 060611000
 119 14 060571000
 119 15 060531000
 119 16 060462000
 119 17 060363000
 119 18 040304000
 119 19 030344000
 119 20 020355000
 119 21 020445000
 119 22 010495000
 119 23 010475000
 119 24 010535000
 120 01 010564000
 120 02 010524000
 120 03 010544000
 120 04 010604000
 120 05 010454000
 120 06 010314000
 120 07 010364000
 120 08 010464000
 120 09 020424000
 120 10 020524000
 120 11 020454000
 120 12 030514000
 120 13 020654000
 120 14 020634000
 120 15 020515000
 120 16 020615000
 120 17 020595000
 120 18 010555000
 120 19 010505000
 120 20 010475000
 120 21 160445000
 120 22 010575000
 120 23 010535000
 120 24 010494000
 121 01 010554000
 121 02 010524000
 121 03 010374000
 121 04 010304000
 121 05 160294000
 121 06 010364000
 121 07 010404000
 121 08 020444000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-124	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

121 09 020344000
121 10 020304000
121 11 020354000
121 12 010475000
121 13 160465000
121 14 150586000
121 15 150596000
121 16 160536000
121 17 020675000
121 18 020635000
121 19 010585000
121 20 160406000
121 21 150476000
121 22 150445000
121 23 150435000
121 24 150435000
122 01 150395000
122 02 150395000
122 03 150385000
122 04 160385000
122 05 160394000
122 06 160345000
122 07 150375000
122 08 150355000
122 09 010294000
122 10 020294000
122 11 030414000
122 12 030535000
122 13 030435000
122 14 020465000
122 15 020565000
122 16 020595000
122 17 020575000
122 18 010456000
122 19 150367000
122 20 150526000
122 21 150566000
122 22 150566000
122 23 150546000
122 24 150556000
123 01 150515000
123 02 150555000
123 03 150545000
123 04 150615000
123 05 150575000
123 06 150555000
123 07 150645000
123 08 150595000
123 09 150615000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-125	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

123 10 150556000
123 11 010475000
123 12 160465000
123 13 150546000
123 14 150596000
123 15 150647000
123 16 150677000
123 17 150727000
123 18 150727000
123 19 150797000
123 20 160836000
123 21 020995000
123 22 021025000
123 23 040565002
123 24 050255004
124 01 080334015
124 02 080394000
124 03 070514000
124 04 070604000
124 05 070614000
124 06 070594002
124 07 070544002
124 08 070424002
124 09 080414000
124 10 070434000
124 11 080464000
124 12 080414000
124 13 080424003
124 14 090464002
124 15 090474003
124 16 080524003
124 17 090494002
124 18 090624000
124 19 090594001
124 20 090514004
124 21 100404003
124 22 090385000
124 23 090285000
124 24 070255000
125 01 070285000
125 02 060345000
125 03 060355000
125 04 070345000
125 05 070285000
125 06 070465000
125 07 070634000
125 08 070594000
125 09 070592000
125 10 070551000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-126	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

125 11 070551000
125 12 070521000
125 13 060461000
125 14 060461000
125 15 050412000
125 16 050372000
125 17 050423000
125 18 040404000
125 19 030324000
125 20 020364000
125 21 020455000
125 22 020535000
125 23 020595000
125 24 020535000
126 01 020525000
126 02 020515000
126 03 020525000
126 04 020455000
126 05 020544000
126 06 020604000
126 07 020514000
126 08 020514000
126 09 030482000
126 10 020331000
126 11 020391000
126 12 030462000
126 13 040511000
126 14 040511000
126 15 040501000
126 16 040462000
126 17 040364000
126 18 040425002
126 19 020245000
126 20 010395000
126 21 010335000
126 22 020295000
126 23 040255000
126 24 060345000
127 01 080415000
127 02 090355000
127 03 090285000
127 04 090275000
127 05 090275000
127 06 090315000
127 07 090294000
127 08 080324000
127 09 090393000
127 10 090342000
127 11 080242000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-127	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

127 12 040272000
 127 13 030242000
 127 14 030252000
 127 15 040352000
 127 16 040342000
 127 17 040354000
 127 18 030214000
 127 19 150425000
 127 20 150395000
 127 21 150345000
 127 22 160446000
 127 23 010365000
 127 24 020235000
 128 01 010245000
 128 02 010354000
 128 03 010314000
 128 04 010264000
 128 05 010295000
 128 06 120175000
 128 07 140175000
 128 08 150264000
 128 09 160404000
 128 10 160533000
 128 11 150464000
 128 12 150465000
 128 13 150356000
 128 14 160197000
 128 15 080345007
 128 16 070195000
 128 17 060274000
 128 18 060264000
 128 19 060225000
 128 20 060335000
 128 21 050395000
 128 22 080175000
 128 23 080266000
 128 24 090375000
 129 01 100545000
 129 02 100505000
 129 03 100435000
 129 04 100464000
 129 05 110285000
 129 06 100335000
 129 07 130314000
 129 08 130403000
 129 09 130401000
 129 10 140461000
 129 11 130381000
 129 12 140401000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-128	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

129 13 160551000
129 14 160841000
129 15 160851000
129 16 160801000
129 17 160732000
129 18 160694000
129 19 150704000
129 20 150674000
129 21 140445000
129 22 140405000
129 23 130225000
129 24 130185000
130 01 130175000
130 02 140255000
130 03 140224000
130 04 140244000
130 05 140164000
130 06 120194000
130 07 140134000
130 08 010264000
130 09 010253000
130 10 160164000
130 11 010204000
130 12 010204000
130 13 160255000
130 14 160366000
130 15 160386000
130 16 160386000
130 17 150396000
130 18 150375000
130 19 150325000
130 20 140136000
130 21 120216000
130 22 150306000
130 23 100376000
130 24 090665081
131 01 110425000
131 02 100296031
131 03 160686001
131 04 010575000
131 05 070215000
131 06 080195000
131 07 090165000
131 08 050104000
131 09 160184000
131 10 160404000
131 11 150624000
131 12 150575000
131 13 150535000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-129	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

131 14 150535000
131 15 150495000
131 16 150536000
131 17 150546000
131 18 150546000
131 19 150376000
131 20 150277000
131 21 150257000
131 22 150227000
131 23 020196000
131 24 030296000
132 01 030416000
132 02 030356000
132 03 030226000
132 04 040185000
132 05 120195000
132 06 150216000
132 07 150216000
132 08 160215000
132 09 160225000
132 10 160194000
132 11 010184000
132 12 020214000
132 13 010215000
132 14 160246000
132 15 150266000
132 16 150627000
132 17 150387000
132 18 150397000
132 19 150327000
132 20 150257000
132 21 150247000
132 22 150177000
132 23 160126000
132 24 160146000
133 01 160215000
133 02 160205000
133 03 160195000
133 04 010156000
133 05 160125000
133 06 010185000
133 07 020175000
133 08 030175000
133 09 020214000
133 10 020204000
133 11 010235017
133 12 030324000
133 13 030334000
133 14 030384000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-130	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

133 15 030344000
 133 16 030305000
 133 17 010325000
 133 18 010306000
 133 19 020315000
 133 20 010316000
 133 21 150216000
 133 22 150256000
 133 23 160306000
 133 24 150256000
 134 01 160245000
 134 02 020215000
 134 03 030225000
 134 04 030185000
 134 05 010125000
 134 06 160165000
 134 07 160215000
 134 08 020234000
 134 09 020184000
 134 10 160194000
 134 11 160264000
 134 12 150425000
 134 13 150455000
 134 14 150505000
 134 15 150576000
 134 16 150556000
 134 17 150576000
 134 18 150457000
 134 19 150347000
 134 20 140267000
 134 21 150246000
 134 22 150256000
 134 23 150326000
 134 24 150315000
 135 01 150325000
 135 02 150325000
 135 03 150255000
 135 04 140155000
 135 05 120135000
 135 06 120125000
 135 07 130124000
 135 08 130134000
 135 09 160204000
 135 10 010174000
 135 11 160214000
 135 12 160275000
 135 13 150465000
 135 14 150466000
 135 15 150516000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-131	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

135 16 150476000
135 17 150416000
135 18 020445000
135 19 020466000
135 20 010426000
135 21 010465000
135 22 010425000
135 23 010415000
135 24 020485000
136 01 020445000
136 02 020415000
136 03 020335000
136 04 010325000
136 05 010335000
136 06 010355000
136 07 020374000
136 08 030394000
136 09 030344000
136 10 030304000
136 11 030294000
136 12 030303000
136 13 030313000
136 14 030334000
136 15 030404000
136 16 030464000
136 17 030435000
136 18 020415000
136 19 020385000
136 20 020426000
136 21 020386000
136 22 030515000
136 23 070574000
136 24 060254002
137 01 030224000
137 02 020274000
137 03 030254000
137 04 030314000
137 05 040275000
137 06 050154000
137 07 050184000
137 08 060194000
137 09 070084000
137 10 050174000
137 11 050174000
137 12 070153000
137 13 050213000
137 14 040233000
137 15 060164000
137 16 030224000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-132	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

137 17 040154000
137 18 010145000
137 19 160315000
137 20 160345000
137 21 150235000
137 22 120175000
137 23 130215000
137 24 140255000
138 01 150245000
138 02 150215000
138 03 130145000
138 04 120105000
138 05 120256000
138 06 130145000
138 07 130175000
138 08 150244000
138 09 010234000
138 10 010264000
138 11 010244000
138 12 160384000
138 13 160404000
138 14 160504000
138 15 160754000
138 16 160804000
138 17 150584000
138 18 150594000
138 19 150624000
138 20 150484000
138 21 140375000
138 22 150335000
138 23 010215000
138 24 160125000
139 01 160275000
139 02 160334000
139 03 160454000
139 04 010454000
139 05 010384000
139 06 020384000
139 07 020344000
139 08 020354000
139 09 030384000
139 10 030393000
139 11 030382000
139 12 040462000
139 13 030422000
139 14 030503000
139 15 030464000
139 16 030474000
139 17 030464000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-133	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

139 18 030515000
 139 19 020385000
 139 20 030315000
 139 21 050305000
 139 22 050335005
 139 23 050235000
 139 24 040315000
 140 01 040344000
 140 02 040345000
 140 03 030284001
 140 04 040264000
 140 05 050244000
 140 06 050314000
 140 07 050304000
 140 08 060234000
 140 09 070264000
 140 10 070304000
 140 11 070224000
 140 12 080194000
 140 13 070124000
 140 14 070194000
 140 15 100514002
 140 16 110394001
 140 17 110304000
 140 18 110274000
 140 19 120264000
 140 20 130095000
 140 21 130115000
 140 22 130194000
 140 23 140184000
 140 24 130164000
 141 01 120154000
 141 02 120225000
 141 03 120175000
 141 04 120225000
 141 05 120225000
 141 06 130175000
 141 07 130244000
 141 08 130304000
 141 09 130294000
 141 10 140333000
 141 11 140342000
 141 12 160501000
 141 13 160662000
 141 14 160621000
 141 15 160671000
 141 16 150702000
 141 17 150634000
 141 18 150614000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-134	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

141 19 160594000
 141 20 160544000
 141 21 160584000
 141 22 160624000
 141 23 160514000
 141 24 010514000
 142 01 010474000
 142 02 010474000
 142 03 020524000
 142 04 020464000
 142 05 020414000
 142 06 020414000
 142 07 020434000
 142 08 030294000
 142 09 040334000
 142 10 040344000
 142 11 020364003
 142 12 160374000
 142 13 150284000
 142 14 090094000
 142 15 090174000
 142 16 080194000
 142 17 080184000
 142 18 100154000
 142 19 100054000
 142 20 150215000
 142 21 160315000
 142 22 160245000
 142 23 160294000
 142 24 010214000
 143 01 020234000
 143 02 160345000
 143 03 060255000
 143 04 010315000
 143 05 160355000
 143 06 020254000
 143 07 050274000
 143 08 060414000
 143 09 070433000
 143 10 060254000
 143 11 050254000
 143 12 040353000
 143 13 050333000
 143 14 040342000
 143 15 030273000
 143 16 030334000
 143 17 030304000
 143 18 030255000
 143 19 150286000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-135	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

143 20 150346000
143 21 160296000
143 22 020316000
143 23 020305000
143 24 020445000
144 01 020475000
144 02 030235000
144 03 010195000
144 04 020245000
144 05 030205000
144 06 030215000
144 07 040285000
144 08 040304000
144 09 040354000
144 10 050373000
144 11 050363000
144 12 050343000
144 13 040283000
144 14 030294000
144 15 040423000
144 16 040424000
144 17 030395000
144 18 030385000
144 19 030296000
144 20 020266000
144 21 020346000
144 22 020436000
144 23 020365000
144 24 030335000
145 01 030375000
145 02 030435000
145 03 030405000
145 04 040355000
145 05 030315000
145 06 030345000
145 07 030394000
145 08 030444000
145 09 030434000
145 10 030383000
145 11 040453000
145 12 040552000
145 13 040523000
145 14 030464000
145 15 030504000
145 16 030514000
145 17 030595000
145 18 030555000
145 19 030485000
145 20 020505000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-136	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

145 21 040325000
145 22 030445000
145 23 030505000
145 24 040445000
146 01 040385000
146 02 050385000
146 03 060445000
146 04 070345000
146 05 080286000
146 06 080405000
146 07 080315000
146 08 080334000
146 09 090244000
146 10 090214000
146 11 080223000
146 12 050273000
146 13 050273000
146 14 050263000
146 15 160554000
146 16 150625000
146 17 150655000
146 18 150715000
146 19 150644000
146 20 160584007
146 21 020395019
146 22 160754001
146 23 160674000
146 24 010404000
147 01 010314000
147 02 150284000
147 03 120205000
147 04 120294000
147 05 120234000
147 06 120174000
147 07 130214003
147 08 120204001
147 09 110294010
147 10 110293000
147 11 100164000
147 12 110174000
147 13 090294000
147 14 080253000
147 15 120184000
147 16 030184000
147 17 160164000
147 18 150544000
147 19 150644000
147 20 160734000
147 21 160694000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-137 of J-243	

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

147 22 160714000
147 23 160404000
147 24 010254000
148 01 120135000
148 02 110075000
148 03 030195000
148 04 080125000
148 05 110135000
148 06 100195000
148 07 100344000
148 08 110374000
148 09 100414000
148 10 100273000
148 11 030154000
148 12 010253000
148 13 160291000
148 14 150422000
148 15 150513000
148 16 160563000
148 17 150534000
148 18 150634000
148 19 160744000
148 20 150804000
148 21 150814000
148 22 150764000
148 23 150724000
148 24 160604000
149 01 160474000
149 02 160424000
149 03 160314000
149 04 010434000
149 05 030395000
149 06 020514001
149 07 010414000
149 08 040234000
149 09 040274000
149 10 040254000
149 11 060434000
149 12 060414000
149 13 060504000
149 14 070594000
149 15 060504000
149 16 070534000
149 17 060464000
149 18 070465000
149 19 060395000
149 20 050285000
149 21 040335000
149 22 060435000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-138	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

149 23 070495000
 149 24 070445000
 150 01 070455000
 150 02 080545000
 150 03 080495000
 150 04 080445000
 150 05 090525000
 150 06 090555000
 150 07 090484000
 150 08 090424000
 150 09 090383000
 150 10 090382000
 150 11 080303000
 150 12 070412000
 150 13 070511000
 150 14 070542000
 150 15 070512000
 150 16 070553000
 150 17 080484000
 150 18 080504000
 150 19 080375000
 150 20 090275000
 150 21 110275000
 150 22 130196000
 150 23 130176000
 150 24 130186000
 151 01 140206000
 151 02 130166000
 151 03 130186000
 151 04 130126000
 151 05 130126000
 151 06 120206000
 151 07 120145000
 151 08 130214000
 151 09 140253000
 151 10 150343000
 151 11 150501000
 151 12 150501000
 151 13 150492000
 151 14 150452000
 151 15 150484000
 151 16 150444000
 151 17 150384000
 151 18 010354000
 151 19 020354000
 151 20 020384000
 151 21 020424000
 151 22 010384000
 151 23 020384000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-139	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

151 24 020334000
 152 01 010214000
 152 02 120135000
 152 03 120195000
 152 04 130185000
 152 05 140255000
 152 06 140214000
 152 07 130164000
 152 08 130194004
 152 09 130204000
 152 10 140314006
 152 11 130254004
 152 12 130294002
 152 13 140344000
 152 14 140234013
 152 15 120224021
 152 16 110384013
 152 17 110404000
 152 18 110464000
 152 19 120384000
 152 20 110384000
 152 21 110354000
 152 22 100344000
 152 23 100284000
 152 24 100234001
 153 01 100254000
 153 02 080174000
 153 03 070174000
 153 04 110094000
 153 05 100114000
 153 06 110134000
 153 07 120144000
 153 08 130094000
 153 09 010134000
 153 10 030114000
 153 11 010194000
 153 12 160214000
 153 13 150254000
 153 14 010304000
 153 15 060584000
 153 16 070555009
 153 17 050315002
 153 18 020394000
 153 19 030304000
 153 20 020284000
 153 21 010304000
 153 22 130215000
 153 23 120245000
 153 24 150285000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-140	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

154 01 160335000
154 02 010384000
154 03 160395000
154 04 020305000
154 05 050205000
154 06 040365000
154 07 050415000
154 08 050334000
154 09 050294000
154 10 040483000
154 11 050493000
154 12 050413000
154 13 050393000
154 14 040372000
154 15 030414000
154 16 040584000
154 17 060324000
154 18 070144000
154 19 160144000
154 20 030444006
154 21 100245002
154 22 010185000
154 23 020215000
154 24 050075000
155 01 040135000
155 02 060245000
155 03 040255000
155 04 040305000
155 05 050255000
155 06 060365000
155 07 060364000
155 08 070394000
155 09 060314000
155 10 070373000
155 11 060354000
155 12 070453000
155 13 080443000
155 14 070403000
155 15 070353000
155 16 070384000
155 17 070374000
155 18 060264000
155 19 050205000
155 20 060195000
155 21 050095000
155 22 040136000
155 23 040176000
155 24 030256000
156 01 030326000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-141	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

156 02 040286000
 156 03 090335000
 156 04 110326000
 156 05 110316000
 156 06 110325000
 156 07 110394000
 156 08 120284000
 156 09 120274000
 156 10 120264000
 156 11 120254000
 156 12 120254000
 156 13 160313000
 156 14 160504000
 156 15 150424000
 156 16 140344000
 156 17 130235000
 156 18 120165000
 156 19 120175000
 156 20 130145000
 156 21 110285000
 156 22 120215000
 156 23 120255000
 156 24 120225000
 157 01 120304000
 157 02 120374000
 157 03 120354000
 157 04 110384015
 157 05 120364012
 157 06 120464005
 157 07 120514006
 157 08 120464000
 157 09 120334000
 157 10 120344002
 157 11 120424000
 157 12 130394000
 157 13 120434000
 157 14 120514000
 157 15 130434003
 157 16 120414008
 157 17 110414018
 157 18 110474019
 157 19 100424013
 157 20 110444005
 157 21 110464003
 157 22 110474000
 157 23 120454000
 157 24 120454000
 158 01 110434000
 158 02 110394000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-142	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

158 03 110394000
158 04 110394000
158 05 110394000
158 06 100314000
158 07 100344001
158 08 110394000
158 09 100414000
158 10 100294000
158 11 100344000
158 12 100324000
158 13 100344000
158 14 090224000
158 15 090114000
158 16 110134000
158 17 090104000
158 18 140074000
158 19 140104000
158 20 140104000
158 21 120124000
158 22 140115000
158 23 130155000
158 24 150175000
159 01 010274000
159 02 030274000
159 03 030195000
159 04 040155000
159 05 050104000
159 06 080074000
159 07 100084000
159 08 030174000
159 09 010244000
159 10 160273000
159 11 160292000
159 12 150314000
159 13 160324000
159 14 150375000
159 15 150425000
159 16 150415000
159 17 150485000
159 18 150495000
159 19 150434000
159 20 150434000
159 21 150395000
159 22 150265000
159 23 020345000
159 24 030275000
160 01 030255000
160 02 030285000
160 03 040225000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-143	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

160 04 030185000
 160 05 020205000
 160 06 030195000
 160 07 020175000
 160 08 030174000
 160 09 030264000
 160 10 030234000
 160 11 030204000
 160 12 010194000
 160 13 150364000
 160 14 160445000
 160 15 150615000
 160 16 150655000
 160 17 150555000
 160 18 150465000
 160 19 140355000
 160 20 140246000
 160 21 140217000
 160 22 150236000
 160 23 020275000
 160 24 020265000
 161 01 030285000
 161 02 020214000
 161 03 020214000
 161 04 020204000
 161 05 030234000
 161 06 030254000
 161 07 030224000
 161 08 040284000
 161 09 050264000
 161 10 040254000
 161 11 010194000
 161 12 010234000
 161 13 010265000
 161 14 020295000
 161 15 040384000
 161 16 040395000
 161 17 030375000
 161 18 030375000
 161 19 030365000
 161 20 030306000
 161 21 040296000
 161 22 030306000
 161 23 030316000
 161 24 040296000
 162 01 040286000
 162 02 040305000
 162 03 040335000
 162 04 040225000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-144	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

162 05 040175000
162 06 050185000
162 07 050305000
162 08 060334000
162 09 070394000
162 10 070324000
162 11 080304000
162 12 070244000
162 13 070304000
162 14 080394000
162 15 090414000
162 16 080374000
162 17 090294000
162 18 100534074
162 19 020175003
162 20 030255000
162 21 050165002
162 22 080245005
162 23 110294000
162 24 120304000
163 01 120404000
163 02 120344000
163 03 110304000
163 04 110384002
163 05 110454009
163 06 120294001
163 07 120264000
163 08 120324001
163 09 110514000
163 10 120464000
163 11 120384000
163 12 120244007
163 13 120294104
163 14 120344003
163 15 110344001
163 16 120234001
163 17 130164000
163 18 120154000
163 19 150054000
163 20 120065000
163 21 110145001
163 22 090125000
163 23 070215000
163 24 070265000
164 01 080255000
164 02 090225000
164 03 090295000
164 04 100236000
164 05 100255000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-145	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

164 06 100215000
164 07 100344000
164 08 110384000
164 09 120314000
164 10 120274000
164 11 100214000
164 12 080164000
164 13 080214000
164 14 060304000
164 15 070254000
164 16 090214000
164 17 160374000
164 18 150774000
164 19 150794000
164 20 160834000
164 21 160724000
164 22 010594000
164 23 010594000
164 24 010574000
165 01 020514000
165 02 010574000
165 03 010504000
165 04 010514000
165 05 010474000
165 06 010524000
165 07 010494000
165 08 160474000
165 09 160464000
165 10 160514000
165 11 150574000
165 12 150544000
165 13 150654000
165 14 150714000
165 15 150754000
165 16 150774000
165 17 150824000
165 18 150874000
165 19 150844000
165 20 160814000
165 21 160784000
165 22 160744000
165 23 160724000
165 24 160704000
166 01 160574000
166 02 160554000
166 03 160534000
166 04 010534000
166 05 010544000
166 06 010514000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-146	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

166 07 010514000
166 08 020564000
166 09 020444000
166 10 030594000
166 11 030574000
166 12 030463000
166 13 040314000
166 14 040324000
166 15 030284000
166 16 020334000
166 17 020345000
166 18 010425000
166 19 010545000
166 20 160455000
166 21 030535060
166 22 010445000
166 23 160395000
166 24 100295000
167 01 140236000
167 02 150265000
167 03 010285000
167 04 020275000
167 05 020275000
167 06 020335000
167 07 030344000
167 08 040374000
167 09 030374000
167 10 040344000
167 11 030284000
167 12 030244000
167 13 030244000
167 14 160184000
167 15 150285000
167 16 010305000
167 17 020385000
167 18 020455000
167 19 040345000
167 20 140206000
167 21 010246000
167 22 010256000
167 23 140175000
167 24 150165000
168 01 030255000
168 02 030205000
168 03 040185000
168 04 030215000
168 05 020255000
168 06 020215000
168 07 020184000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-147	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

168 08 020174000
168 09 020164000
168 10 030174000
168 11 040134000
168 12 030134000
168 13 020124000
168 14 160164000
168 15 160385000
168 16 160385005
168 17 160354002
168 18 160465000
168 19 160274000
168 20 150224000
168 21 150254000
168 22 150435000
168 23 150395000
168 24 150285000
169 01 160145000
169 02 030114000
169 03 010135000
169 04 020165000
169 05 020195000
169 06 030204000
169 07 030134000
169 08 030074000
169 09 010134000
169 10 160164000
169 11 010224000
169 12 030253000
169 13 020254000
169 14 030254000
169 15 010194000
169 16 100225000
169 17 150245018
169 18 020216000
169 19 010255000
169 20 020284000
169 21 060305022
169 22 040255000
169 23 010425000
169 24 020325000
170 01 030254000
170 02 030334000
170 03 040385000
170 04 040364000
170 05 040345000
170 06 050294000
170 07 040314000
170 08 050314000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-148	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

170 09 050374000
170 10 070344000
170 11 060224000
170 12 060244000
170 13 070284000
170 14 070314000
170 15 070274000
170 16 030154000
170 17 030104000
170 18 040225000
170 19 050225000
170 20 030275000
170 21 020245000
170 22 020115000
170 23 030175000
170 24 040175000
171 01 050305000
171 02 060425000
171 03 070455000
171 04 070375000
171 05 070345000
171 06 070335000
171 07 070374000
171 08 080524000
171 09 080444000
171 10 080463000
171 11 070473000
171 12 080513000
171 13 080533000
171 14 070613000
171 15 070594000
171 16 070514000
171 17 080544000
171 18 070554000
171 19 080345000
171 20 080275000
171 21 070415000
171 22 070426000
171 23 080495000
171 24 080625000
172 01 090555000
172 02 090555000
172 03 090575000
172 04 100365000
172 05 090405000
172 06 090395000
172 07 090394000
172 08 090394000
172 09 090353000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-149	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

172 10 090253000
172 11 080264000
172 12 090253000
172 13 050183000
172 14 060173000
172 15 050203000
172 16 060203000
172 17 070294000
172 18 050284000
172 19 060245000
172 20 070225000
172 21 070255000
172 22 060215000
172 23 040275000
172 24 040255000
173 01 050155000
173 02 040215000
173 03 030235000
173 04 030285000
173 05 040285000
173 06 040125000
173 07 020184000
173 08 020174000
173 09 010174000
173 10 160303000
173 11 160402000
173 12 160402000
173 13 150593000
173 14 150693000
173 15 150794000
173 16 150714000
173 17 010484000
173 18 020534000
173 19 020544000
173 20 020504000
173 21 010514000
173 22 010594000
173 23 010584000
173 24 010594000
174 01 010554000
174 02 010604000
174 03 010594000
174 04 010604000
174 05 010574000
174 06 010544000
174 07 010514000
174 08 010514000
174 09 020524000
174 10 030614000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-150	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

174 11 030614000
 174 12 030534000
 174 13 030493000
 174 14 040374000
 174 15 040314000
 174 16 160184000
 174 17 020255000
 174 18 030195000
 174 19 070465015
 174 20 020165000
 174 21 030275000
 174 22 040205000
 174 23 050225000
 174 24 050265000
 175 01 050305000
 175 02 070275000
 175 03 070215000
 175 04 080225000
 175 05 090295000
 175 06 090205000
 175 07 100185000
 175 08 100195000
 175 09 100184000
 175 10 110204000
 175 11 120124000
 175 12 150134000
 175 13 010194000
 175 14 010264000
 175 15 020284000
 175 16 030254000
 175 17 020264000
 175 18 020314000
 175 19 030284000
 175 20 030224000
 175 21 030235000
 175 22 030165000
 175 23 030195000
 175 24 030205000
 176 01 030175000
 176 02 030205000
 176 03 040135000
 176 04 050135000
 176 05 060095000
 176 06 070195000
 176 07 100134000
 176 08 100094000
 176 09 160214000
 176 10 160263000
 176 11 150303000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-151	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

176 12 150511000
176 13 150632000
176 14 150723000
176 15 150763000
176 16 150714000
176 17 150644000
176 18 150554000
176 19 150484000
176 20 150484000
176 21 150475000
176 22 160494000
176 23 160474000
176 24 160444000
177 01 150434000
177 02 160404000
177 03 160384000
177 04 160374000
177 05 010364000
177 06 010264000
177 07 010334000
177 08 160304000
177 09 150314000
177 10 150313000
177 11 150314000
177 12 150384000
177 13 150394000
177 14 150485000
177 15 010615033
177 16 160805009
177 17 150775014
177 18 120256023
177 19 040245009
177 20 020265002
177 21 150215001
177 22 130176000
177 23 120146000
177 24 100146000
178 01 120166000
178 02 160175000
178 03 020115000
178 04 100105000
178 05 100105000
178 06 120085000
178 07 090075000
178 08 060164000
178 09 070344000
178 10 080344000
178 11 070274000
178 12 070394000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-152	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

178 13 070404000
178 14 060384000
178 15 070404000
178 16 070444000
178 17 070584000
178 18 070585000
178 19 070515000
178 20 080376000
178 21 070306000
178 22 070315000
178 23 060435000
178 24 060425000
179 01 070435000
179 02 070405000
179 03 070396000
179 04 080256000
179 05 070286000
179 06 070236000
179 07 070195000
179 08 070194000
179 09 060214000
179 10 050294000
179 11 030273000
179 12 040392000
179 13 040443000
179 14 030463000
179 15 030514000
179 16 040484000
179 17 040464000
179 18 040434000
179 19 040325000
179 20 040305000
179 21 040345000
179 22 040285000
179 23 030345000
179 24 030385000
180 01 030335000
180 02 030355000
180 03 040365000
180 04 040335000
180 05 040185000
180 06 060135000
180 07 080155000
180 08 070144000
180 09 080124000
180 10 100134000
180 11 020174000
180 12 010134000
180 13 160264000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-153	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

180 14 160384000
 180 15 160444000
 180 16 160604000
 180 17 160624000
 180 18 160584000
 180 19 160474000
 180 20 160494000
 180 21 160464000
 180 22 160504000
 180 23 010424000
 180 24 020404000
 181 01 040505027
 181 02 050305002
 181 03 070295000
 181 04 070375000
 181 05 070365000
 181 06 080385000
 181 07 070394000
 181 08 080464000
 181 09 070424000
 181 10 080343000
 181 11 070274000
 181 12 070294000
 181 13 070254000
 181 14 060293000
 181 15 050354000
 181 16 050374000
 181 17 050344000
 181 18 060314000
 181 19 050304000
 181 20 040235000
 181 21 030265000
 181 22 030215000
 181 23 030285000
 181 24 030305000
 182 01 040346000
 182 02 040346000
 182 03 040366000
 182 04 040326000
 182 05 040286000
 182 06 050155000
 182 07 050125000
 182 08 030144000
 182 09 030254000
 182 10 030274000
 182 11 030303000
 182 12 030303000
 182 13 040293000
 182 14 040323000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-154	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

182 15 040264000
182 16 010414000
182 17 150564000
182 18 150514000
182 19 150425000
182 20 150395000
182 21 160375000
182 22 010415000
182 23 030385000
182 24 020355000
183 01 010234000
183 02 010284000
183 03 010344000
183 04 010354000
183 05 160175000
183 06 150205000
183 07 160254000
183 08 160224000
183 09 150273000
183 10 150303000
183 11 150442000
183 12 150483000
183 13 150601000
183 14 150692000
183 15 150753000
183 16 150684008
183 17 160754072
183 18 150805000
183 19 160925000
183 20 160675000
183 21 010505000
183 22 010415000
183 23 010385000
183 24 010314000
184 01 010255000
184 02 020294000
184 03 020194000
184 04 020195000
184 05 070095000
184 06 150115000
184 07 040174000
184 08 060194000
184 09 070194000
184 10 080184000
184 11 080164000
184 12 100154000
184 13 090214000
184 14 010184000
184 15 160194000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-155	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

184 16 150425000
184 17 150415000
184 18 150295000
184 19 160295000
184 20 010145000
184 21 010176000
184 22 020206000
184 23 030196000
184 24 050146000
185 01 090186000
185 02 110195000
185 03 110276000
185 04 100306000
185 05 100306000
185 06 100316000
185 07 100305000
185 08 110354000
185 09 110334000
185 10 120224000
185 11 110184000
185 12 110214000
185 13 090194000
185 14 090184000
185 15 080164000
185 16 080144000
185 17 150414000
185 18 160674000
185 19 160754000
185 20 150744000
185 21 150555000
185 22 150634000
185 23 160584000
185 24 160554000
186 01 150445000
186 02 160474000
186 03 150255000
186 04 120136000
186 05 120136000
186 06 130126000
186 07 160285000
186 08 160374000
186 09 150443000
186 10 150502000
186 11 150591000
186 12 150702000
186 13 150744000
186 14 150754000
186 15 150834000
186 16 150854000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-156	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

186 17 150894000
186 18 150874000
186 19 150834000
186 20 150724000
186 21 150584000
186 22 150734000
186 23 150724000
186 24 150674000
187 01 150664000
187 02 150574000
187 03 150494000
187 04 150424000
187 05 160314022
187 06 110135001
187 07 160165000
187 08 030274000
187 09 040264000
187 10 040323000
187 11 040374000
187 12 050424000
187 13 040374000
187 14 040414000
187 15 040424000
187 16 040444000
187 17 040375000
187 18 040345000
187 19 040275000
187 20 050375000
187 21 040275000
187 22 040345000
187 23 040295000
187 24 040305000
188 01 050155000
188 02 060295000
188 03 070275000
188 04 060385000
188 05 070355000
188 06 070375000
188 07 080444000
188 08 080474000
188 09 090504000
188 10 090533000
188 11 080513000
188 12 080463000
188 13 070443000
188 14 070463000
188 15 070474000
188 16 080434000
188 17 070464000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-157	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

188 18 070344000
188 19 070235000
188 20 080285000
188 21 090215000
188 22 110155000
188 23 100085000
188 24 040186000
189 01 060096000
189 02 110136000
189 03 120236000
189 04 120086000
189 05 120106000
189 06 130156000
189 07 140175000
189 08 140314000
189 09 150454000
189 10 150513000
189 11 150532000
189 12 150544000
189 13 150594000
189 14 150715000
189 15 150745000
189 16 150785000
189 17 150594000
189 18 120305021
189 19 100255001
189 20 110106000
189 21 020265000
189 22 020324000
189 23 020344000
189 24 020364000
190 01 030344000
190 02 040384000
190 03 040314000
190 04 040235000
190 05 050144000
190 06 040214000
190 07 030204000
190 08 040204000
190 09 060234000
190 10 040264000
190 11 030294000
190 12 040494000
190 13 040474000
190 14 040524000
190 15 040504000
190 16 050424000
190 17 050374000
190 18 050334000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-158	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

190 19 050335000
 190 20 030335000
 190 21 030325000
 190 22 030376000
 190 23 030356000
 190 24 040336000
 191 01 040305000
 191 02 060265000
 191 03 050235000
 191 04 040235000
 191 05 040305000
 191 06 060395000
 191 07 070434000
 191 08 070414000
 191 09 070464000
 191 10 070484000
 191 11 070483000
 191 12 060463000
 191 13 070533000
 191 14 070473000
 191 15 070404000
 191 16 070374000
 191 17 070354000
 191 18 080325000
 191 19 090255000
 191 20 100336000
 191 21 090296000
 191 22 090295000
 191 23 090285000
 191 24 090206000
 192 01 100215000
 192 02 120146000
 192 03 130106000
 192 04 120146000
 192 05 100176000
 192 06 100116000
 192 07 100095000
 192 08 070174000
 192 09 060194000
 192 10 070214000
 192 11 070224000
 192 12 040193000
 192 13 050224000
 192 14 050284000
 192 15 050374000
 192 16 050364000
 192 17 050274000
 192 18 060244000
 192 19 060165000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-159	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

192 20 050175000
 192 21 080135000
 192 22 050145000
 192 23 070115000
 192 24 030115000
 193 01 040105000
 193 02 090156000
 193 03 150126000
 193 04 150076000
 193 05 100126000
 193 06 110136000
 193 07 110125000
 193 08 110214000
 193 09 120184000
 193 10 120134000
 193 11 150164000
 193 12 010254000
 193 13 160243000
 193 14 150253000
 193 15 150264000
 193 16 150154000
 193 17 150384000
 193 18 160574000
 193 19 160584000
 193 20 150514000
 193 21 150564000
 193 22 150564000
 193 23 160584000
 193 24 160504000
 194 01 150465001
 194 02 150485000
 194 03 150415000
 194 04 160644000
 194 05 160754000
 194 06 150684000
 194 07 160624034
 194 08 150655035
 194 09 150675000
 194 10 150894000
 194 11 150834000
 194 12 150854001
 194 13 150864014
 194 14 150804018
 194 15 160934107
 194 16 150724051
 194 17 150804045
 194 18 150794057
 194 19 150944015
 194 20 160764000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-160	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

194 21 020464000
194 22 060184000
194 23 070205000
194 24 080215000
195 01 070145000
195 02 080195000
195 03 090205000
195 04 100185000
195 05 100264000
195 06 100354000
195 07 100404000
195 08 100374000
195 09 090304000
195 10 090344000
195 11 080304000
195 12 080294000
195 13 080384000
195 14 080284000
195 15 090314000
195 16 100374000
195 17 100314000
195 18 100304000
195 19 110225000
195 20 110255000
195 21 120205000
195 22 130145000
195 23 140145000
195 24 130135000
196 01 120095000
196 02 120155000
196 03 130165000
196 04 130195000
196 05 130155000
196 06 130145000
196 07 140234000
196 08 150284000
196 09 150374000
196 10 150473000
196 11 150563000
196 12 150572000
196 13 150633000
196 14 150742000
196 15 150874000
196 16 130704100
196 17 110864034
196 18 140455000
196 19 140365000
196 20 010325000
196 21 090315000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-161	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

196 22 090185000
 196 23 050255000
 196 24 050255000
 197 01 050245000
 197 02 040275000
 197 03 040285000
 197 04 040335000
 197 05 040425000
 197 06 040345000
 197 07 030485000
 197 08 040554000
 197 09 040624000
 197 10 050614000
 197 11 050584000
 197 12 050613000
 197 13 050573000
 197 14 050593000
 197 15 050603000
 197 16 050624000
 197 17 040594000
 197 18 040484000
 197 19 040415000
 197 20 050355000
 197 21 040315000
 197 22 040335000
 197 23 040395000
 197 24 050425000
 198 01 040315000
 198 02 030315000
 198 03 030365000
 198 04 030395000
 198 05 030405000
 198 06 030495000
 198 07 040534000
 198 08 040524000
 198 09 050524000
 198 10 060613000
 198 11 050503000
 198 12 050474000
 198 13 050474000
 198 14 050494000
 198 15 050424000
 198 16 050434000
 198 17 050474000
 198 18 050404000
 198 19 050294000
 198 20 040215000
 198 21 030255000
 198 22 030275000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-162	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

198 23 040286000
 198 24 030256000
 199 01 040275000
 199 02 060205000
 199 03 030115000
 199 04 020085000
 199 05 020155000
 199 06 040105000
 199 07 070095000
 199 08 090124000
 199 09 140104000
 199 10 160224000
 199 11 160284000
 199 12 150274000
 199 13 150354000
 199 14 150374000
 199 15 150455000
 199 16 120234000
 199 17 120185000
 199 18 130165000
 199 19 150325000
 199 20 160285000
 199 21 160355000
 199 22 010415000
 199 23 030305000
 199 24 040255000
 200 01 040284000
 200 02 030355000
 200 03 040265000
 200 04 160275001
 200 05 120175003
 200 06 090205000
 200 07 100205001
 200 08 100295036
 200 09 100255063
 200 10 100355020
 200 11 100384061
 200 12 100284012
 200 13 100304000
 200 14 110434000
 200 15 110424000
 200 16 110473000
 200 17 110474006
 200 18 100434003
 200 19 100464007
 200 20 100434000
 200 21 100374000
 200 22 100384000
 200 23 100384000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-163	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

200 24 100344000
 201 01 090294000
 201 02 100304000
 201 03 090244000
 201 04 080214000
 201 05 070304000
 201 06 070234000
 201 07 070224000
 201 08 070254000
 201 09 070264000
 201 10 070304000
 201 11 060314000
 201 12 060184000
 201 13 020164000
 201 14 150214000
 201 15 160164000
 201 16 070174000
 201 17 110114000
 201 18 150174000
 201 19 150114000
 201 20 150175000
 201 21 010454000
 201 22 010484000
 201 23 010474000
 201 24 020355000
 202 01 030325000
 202 02 030305000
 202 03 040245000
 202 04 060235000
 202 05 070175000
 202 06 070215000
 202 07 070134000
 202 08 060174000
 202 09 070254000
 202 10 060224000
 202 11 040194000
 202 12 040213000
 202 13 050233000
 202 14 040254000
 202 15 050214000
 202 16 050224000
 202 17 060234000
 202 18 060264000
 202 19 060165000
 202 20 060145000
 202 21 070075000
 202 22 040125000
 202 23 050105000
 202 24 060075000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-164	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

203 01 080085000
203 02 080106000
203 03 090105000
203 04 090155000
203 05 130136000
203 06 130115000
203 07 080125000
203 08 080194000
203 09 090224000
203 10 090164000
203 11 110184000
203 12 070174000
203 13 050204000
203 14 020204000
203 15 160224000
203 16 160174000
203 17 160164000
203 18 160215000
203 19 010215000
203 20 030205000
203 21 010245000
203 22 010315000
203 23 020365000
203 24 020365000
204 01 030236000
204 02 020135000
204 03 020085000
204 04 060045000
204 05 140056000
204 06 160125000
204 07 140165000
204 08 160274000
204 09 010214000
204 10 150244000
204 11 150344000
204 12 150504000
204 13 150554000
204 14 150604000
204 15 150644000
204 16 150624000
204 17 150654000
204 18 150644000
204 19 160635000
204 20 160465000
204 21 160505000
204 22 020464000
204 23 160254000
204 24 160225000
205 01 010294000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-165	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

205 02 160304000
205 03 010364000
205 04 010334000
205 05 010304000
205 06 010184000
205 07 010344000
205 08 010354000
205 09 010334000
205 10 160364000
205 11 010294000
205 12 160514000
205 13 010514000
205 14 030554001
205 15 030314000
205 16 030264000
205 17 030244000
205 18 010535000
205 19 020335000
205 20 020295000
205 21 030255000
205 22 040265000
205 23 040255000
205 24 040225000
206 01 040235000
206 02 080125000
206 03 100085000
206 04 110155000
206 05 100345000
206 06 100495000
206 07 100465000
206 08 100524000
206 09 100663000
206 10 100663000
206 11 100563000
206 12 100532000
206 13 100452000
206 14 110492000
206 15 100443000
206 16 110354000
206 17 100374000
206 18 100384000
206 19 100384000
206 20 110295000
206 21 110295000
206 22 110315000
206 23 120305000
206 24 120275000
207 01 110305000
207 02 110354000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-166	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

207 03 110374000
207 04 120414000
207 05 110384000
207 06 110384000
207 07 110384000
207 08 110424000
207 09 110504000
207 10 110514000
207 11 110494000
207 12 110454000
207 13 110474000
207 14 120454000
207 15 110474000
207 16 120384000
207 17 120314000
207 18 120334000
207 19 120274000
207 20 120195000
207 21 120165000
207 22 110225000
207 23 100225000
207 24 100215000
208 01 110255000
208 02 100205000
208 03 080185000
208 04 090215000
208 05 100255000
208 06 100285000
208 07 100354000
208 08 110274000
208 09 120154000
208 10 130214000
208 11 160213000
208 12 030243000
208 13 030253000
208 14 020233000
208 15 160353000
208 16 150524000
208 17 160564000
208 18 160634000
208 19 160724000
208 20 150514000
208 21 140365000
208 22 130265000
208 23 130264000
208 24 140295000
209 01 130284000
209 02 130224000
209 03 140254000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-167	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

209 04 130224000
209 05 130234000
209 06 140324000
209 07 140404000
209 08 140424000
209 09 150774000
209 10 150784000
209 11 150733000
209 12 150682000
209 13 150604132
209 14 150564000
209 15 160513035
209 16 020424000
209 17 020184000
209 18 150305000
209 19 160364000
209 20 160384000
209 21 020434000
209 22 030384000
209 23 050394001
209 24 060174000
210 01 080115000
210 02 040124000
210 03 040174000
210 04 050154000
210 05 080084003
210 06 100074000
210 07 130044000
210 08 030084000
210 09 030084000
210 10 050114000
210 11 040104000
210 12 050124000
210 13 030174000
210 14 160194000
210 15 160254000
210 16 160464000
210 17 160464000
210 18 160514000
210 19 010364000
210 20 010314000
210 21 010174000
210 22 040104000
210 23 070175000
210 24 070165000
211 01 080235000
211 02 090235000
211 03 090135000
211 04 090115000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-168	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

211 05 080125000
211 06 080175000
211 07 100185000
211 08 100144000
211 09 130144000
211 10 110144000
211 11 030264000
211 12 030234000
211 13 030243000
211 14 010174000
211 15 160264000
211 16 160184000
211 17 010184000
211 18 160344000
211 19 160594000
211 20 160614000
211 21 160624000
211 22 160464000
211 23 160384000
211 24 160324000
212 01 160244000
212 02 150254000
212 03 150314000
212 04 160404000
212 05 010384000
212 06 020364000
212 07 010394000
212 08 020324000
212 09 020354000
212 10 020424000
212 11 020414000
212 12 020384000
212 13 150504000
212 14 150535000
212 15 150734000
212 16 150684000
212 17 150615000
212 18 010535000
212 19 160645000
212 20 160675000
212 21 160654000
212 22 160684000
212 23 160674000
212 24 160674000
213 01 160554000
213 02 010554000
213 03 010454000
213 04 010384000
213 05 010464000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-169	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

213 06 010484000
213 07 010514000
213 08 010504000
213 09 020534000
213 10 020544000
213 11 020554000
213 12 020484000
213 13 020574000
213 14 020604000
213 15 020564000
213 16 020534000
213 17 160544000
213 18 150635000
213 19 150685000
213 20 160605000
213 21 160564000
213 22 010534000
213 23 010514000
213 24 010514000
214 01 010414000
214 02 160404000
214 03 010414000
214 04 160444000
214 05 010444000
214 06 010444000
214 07 020424000
214 08 030434002
214 09 100444001
214 10 110284000
214 11 160204000
214 12 160294000
214 13 160384001
214 14 160373000
214 15 160333000
214 16 150324000
214 17 160284000
214 18 010244000
214 19 010304000
214 20 010324000
214 21 010364000
214 22 020254000
214 23 040225000
214 24 040174000
215 01 020144000
215 02 010085000
215 03 080045000
215 04 110085000
215 05 120105000
215 06 100125000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-170	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

215 07 090084000
215 08 110084000
215 09 130124000
215 10 120134000
215 11 160323000
215 12 160431000
215 13 160492000
215 14 160623000
215 15 160613000
215 16 150654000
215 17 150574000
215 18 150404000
215 19 140295000
215 20 150444000
215 21 160464000
215 22 010364000
215 23 020284000
215 24 010274000
216 01 020214000
216 02 040104000
216 03 120065000
216 04 120054000
216 05 140085000
216 06 100095000
216 07 080074000
216 08 070114000
216 09 120194000
216 10 110184000
216 11 140174000
216 12 010292000
216 13 160381000
216 14 160522000
216 15 160591000
216 16 160623000
216 17 160424000
216 18 160314000
216 19 150134000
216 20 100065000
216 21 110065000
216 22 090085000
216 23 050095000
216 24 030175000
217 01 040185000
217 02 040215000
217 03 040245000
217 04 050215000
217 05 060345000
217 06 070345000
217 07 080305000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-171	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

217 08 080334000
217 09 080324000
217 10 080364000
217 11 090303000
217 12 070304000
217 13 070334000
217 14 070234000
217 15 040214000
217 16 030244000
217 17 030294000
217 18 020314000
217 19 010275000
217 20 010405019
217 21 030305001
217 22 030374000
217 23 040324000
217 24 040274000
218 01 040265000
218 02 060294000
218 03 050275004
218 04 070275000
218 05 080305000
218 06 090345000
218 07 090464001
218 08 090494000
218 09 100394000
218 10 100404000
218 11 100444000
218 12 100444000
218 13 100424000
218 14 100404000
218 15 100344000
218 16 110194000
218 17 130084000
218 18 140124000
218 19 120085000
218 20 100115000
218 21 090275000
218 22 090275000
218 23 090305000
218 24 090395000
219 01 090495000
219 02 090495000
219 03 090525000
219 04 090455000
219 05 090505000
219 06 090595000
219 07 090454000
219 08 090464000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-172	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

219 09 100594000
219 10 090623000
219 11 090622000
219 12 090592000
219 13 080572000
219 14 080562000
219 15 080552000
219 16 080614000
219 17 070584000
219 18 080424000
219 19 080455000
219 20 080415000
219 21 070415000
219 22 080425000
219 23 080305000
219 24 080286000
220 01 080295000
220 02 080235000
220 03 070275000
220 04 070315000
220 05 070295000
220 06 080205000
220 07 080275000
220 08 090324000
220 09 080364000
220 10 080463000
220 11 080442000
220 12 080344000
220 13 080394000
220 14 070414000
220 15 080484000
220 16 070504000
220 17 070484000
220 18 070484000
220 19 070395000
220 20 070345000
220 21 070305000
220 22 070285000
220 23 070295000
220 24 060255000
221 01 060245000
221 02 050255000
221 03 060175000
221 04 050205000
221 05 050235000
221 06 040255000
221 07 040245000
221 08 040294000
221 09 040364000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	<input checked="" type="checkbox"/> X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-173	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

221 10 040424000
 221 11 040463000
 221 12 040472000
 221 13 050463000
 221 14 050503000
 221 15 040423000
 221 16 050404000
 221 17 060344000
 221 18 050314000
 221 19 040325000
 221 20 030385000
 221 21 020385000
 221 22 030415000
 221 23 030435000
 221 24 040435000
 222 01 040375000
 222 02 040365000
 222 03 040335000
 222 04 040345000
 222 05 050205000
 222 06 050195000
 222 07 050245000
 222 08 060204000
 222 09 060174000
 222 10 070174000
 222 11 040164000
 222 12 030253000
 222 13 020224000
 222 14 030263000
 222 15 030293000
 222 16 030274000
 222 17 030274000
 222 18 030284000
 222 19 030235000
 222 20 030275000
 222 21 020266000
 222 22 030306000
 222 23 020385000
 222 24 020435000
 223 01 020505000
 223 02 020465000
 223 03 030395000
 223 04 030365000
 223 05 030295000
 223 06 020254000
 223 07 010214000
 223 08 010214000
 223 09 020264000
 223 10 020224000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-174	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

223 11 010213000
223 12 020214000
223 13 160363000
223 14 010464000
223 15 020464000
223 16 020514000
223 17 020624000
223 18 020585000
223 19 010535000
223 20 010575000
223 21 010554000
223 22 010594000
223 23 010674000
223 24 020654000
224 01 020644000
224 02 020624000
224 03 020554000
224 04 020534000
224 05 020434000
224 06 020344000
224 07 020334000
224 08 020314000
224 09 030373000
224 10 020303000
224 11 010233000
224 12 010253000
224 13 010294000
224 14 020454000
224 15 020514000
224 16 020544000
224 17 020405000
224 18 030525001
224 19 020475000
224 20 020395000
224 21 020404000
224 22 020444000
224 23 160474000
224 24 160464000
225 01 160414000
225 02 010344000
225 03 010314000
225 04 160394000
225 05 160424000
225 06 160334000
225 07 160304000
225 08 160324000
225 09 150334000
225 10 150402000
225 11 150572000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-175	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

225 12 150693000
 225 13 150803000
 225 14 150874000
 225 15 150894000
 225 16 150924000
 225 17 151034000
 225 18 150864000
 225 19 150724000
 225 20 160644000
 225 21 160664000
 225 22 160704000
 225 23 150554000
 225 24 150674000
 226 01 150844000
 226 02 160654000
 226 03 010564000
 226 04 020554000
 226 05 020424000
 226 06 020474000
 226 07 020494000
 226 08 020424000
 226 09 020474000
 226 10 020474000
 226 11 020394000
 226 12 030344000
 226 13 040392011
 226 14 050424000
 226 15 060374000
 226 16 060324000
 226 17 080264000
 226 18 080174000
 226 19 070134000
 226 20 060195000
 226 21 050215000
 226 22 060235000
 226 23 060245000
 226 24 070345000
 227 01 070225000
 227 02 070245000
 227 03 070265000
 227 04 070315000
 227 05 080275000
 227 06 070255000
 227 07 070234000
 227 08 070255000
 227 09 070234000
 227 10 080254000
 227 11 080234000
 227 12 090124000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-176	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

227 13 060134002
 227 14 060214004
 227 15 020184001
 227 16 040184000
 227 17 030184004
 227 18 040154003
 227 19 090225001
 227 20 110235002
 227 21 110295012
 227 22 120254006
 227 23 120175007
 227 24 110094002
 228 01 100114000
 228 02 100124000
 228 03 100094000
 228 04 060164000
 228 05 070165000
 228 06 070135000
 228 07 050214000
 228 08 060134000
 228 09 060114000
 228 10 040144000
 228 11 020174000
 228 12 160184000
 228 13 010184000
 228 14 030244000
 228 15 030304000
 228 16 030314000
 228 17 020284000
 228 18 030254000
 228 19 030194000
 228 20 030184000
 228 21 030244000
 228 22 030284000
 228 23 020274000
 228 24 020274000
 229 01 010334000
 229 02 020324000
 229 03 020334000
 229 04 030254002
 229 05 010164012
 229 06 130215004
 229 07 140175002
 229 08 120095000
 229 09 100175000
 229 10 110134000
 229 11 050144000
 229 12 070174000
 229 13 080254000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-177 of J-243	

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

229 14 100194000
229 15 110184000
229 16 160174000
229 17 010214000
229 18 010234000
229 19 020325000
229 20 020305000
229 21 040305000
229 22 050175000
229 23 050295000
229 24 070215000
230 01 070235000
230 02 080215000
230 03 070215000
230 04 090255000
230 05 100305000
230 06 100215000
230 07 090144000
230 08 100154000
230 09 120171000
230 10 110201000
230 11 120134000
230 12 030234000
230 13 020194000
230 14 010204000
230 15 160184000
230 16 160344000
230 17 160344000
230 18 150564012
230 19 150485000
230 20 150594000
230 21 160614000
230 22 160524000
230 23 010584000
230 24 030435003
231 01 040225000
231 02 020385004
231 03 050185000
231 04 130165000
231 05 010344000
231 06 010344000
231 07 020324000
231 08 030284000
231 09 030254000
231 10 030274000
231 11 040174000
231 12 010164000
231 13 010204000
231 14 160403000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-178	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

231 15 150464000
231 16 150384000
231 17 150304000
231 18 150244000
231 19 150545037
231 20 020175000
231 21 010375000
231 22 010515000
231 23 020464000
231 24 010464000
232 01 010504000
232 02 020524000
232 03 020454000
232 04 020434000
232 05 020424000
232 06 020304000
232 07 020354000
232 08 030334000
232 09 030404000
232 10 030294000
232 11 030304000
232 12 020384000
232 13 020283000
232 14 020364000
232 15 040374000
232 16 040324000
232 17 030294000
232 18 020235000
232 19 020295000
232 20 020215000
232 21 010214000
232 22 010245000
232 23 160325000
232 24 160404000
233 01 010374000
233 02 010294000
233 03 010304000
233 04 020244000
233 05 020245000
233 06 020255000
233 07 020254000
233 08 010204000
233 09 160174000
233 10 150274000
233 11 150384000
233 12 150455000
233 13 150505000
233 14 150546000
233 15 150546000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-179	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

233 16 150556000
 233 17 160456000
 233 18 010465000
 233 19 010455000
 233 20 010475000
 233 21 010515000
 233 22 010554000
 233 23 010585000
 233 24 020625000
 234 01 020624000
 234 02 010624000
 234 03 020664000
 234 04 020634000
 234 05 020594000
 234 06 020624000
 234 07 020664000
 234 08 020574000
 234 09 020604000
 234 10 030574000
 234 11 030574000
 234 12 030604000
 234 13 030574000
 234 14 040634000
 234 15 070504000
 234 16 080384016
 234 17 080385000
 234 18 090485000
 234 19 090385000
 234 20 090315000
 234 21 090345000
 234 22 090345000
 234 23 090345000
 234 24 080385000
 235 01 090345000
 235 02 090345000
 235 03 100295000
 235 04 090305000
 235 05 090286000
 235 06 100285000
 235 07 090285000
 235 08 090354000
 235 09 100364000
 235 10 100314000
 235 11 110254000
 235 12 090174000
 235 13 070263000
 235 14 060253000
 235 15 020204000
 235 16 060204000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-180	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

235 17 090154000
 235 18 020094000
 235 19 030105000
 235 20 030235000
 235 21 020304000
 235 22 010374000
 235 23 020415000
 235 24 020435000
 236 01 020445000
 236 02 020445000
 236 03 030415000
 236 04 020415000
 236 05 030385000
 236 06 030335000
 236 07 030205000
 236 08 030244000
 236 09 020254000
 236 10 030244000
 236 11 030253000
 236 12 030293000
 236 13 030282000
 236 14 040303000
 236 15 040284000
 236 16 150404000
 236 17 150424000
 236 18 150414000
 236 19 150175000
 236 20 120095000
 236 21 050095000
 236 22 040215000
 236 23 040245000
 236 24 030305000
 237 01 040245000
 237 02 050115000
 237 03 040135000
 237 04 050165000
 237 05 080175000
 237 06 060125000
 237 07 080135000
 237 08 080154000
 237 09 110313000
 237 10 130253000
 237 11 120233000
 237 12 120233000
 237 13 130224000
 237 14 150384000
 237 15 140314000
 237 16 130354000
 237 17 130284000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-181	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

237 18 140314000
237 19 140295000
237 20 140375000
237 21 140225000
237 22 120225000
237 23 110235000
237 24 110225000
238 01 110215000
238 02 110205000
238 03 110235000
238 04 110266000
238 05 110265000
238 06 110265000
238 07 120255000
238 08 120324000
238 09 130264000
238 10 130204000
238 11 130174000
238 12 150254000
238 13 160313000
238 14 160492000
238 15 160651000
238 16 160723000
238 17 160744000
238 18 160704000
238 19 140435000
238 20 140355000
238 21 130195000
238 22 120215000
238 23 120255000
238 24 130216000
239 01 110256000
239 02 110236000
239 03 110196000
239 04 100186000
239 05 100206000
239 06 110166000
239 07 120146000
239 08 130174000
239 09 140274000
239 10 150392000
239 11 160491000
239 12 160471000
239 13 150521000
239 14 160551000
239 15 160581000
239 16 160622000
239 17 160633000
239 18 160724000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-182	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

239 19 150724000
 239 20 150654000
 239 21 150425000
 239 22 150554000
 239 23 160614000
 239 24 160534000
 240 01 010264000
 240 02 010284000
 240 03 010254000
 240 04 010134000
 240 05 010214000
 240 06 020134000
 240 07 040174000
 240 08 030204000
 240 09 020194000
 240 10 020183000
 240 11 010181000
 240 12 160243000
 240 13 160334000
 240 14 150414000
 240 15 160633000
 240 16 160673000
 240 17 150684000
 240 18 150704000
 240 19 160524000
 240 20 010385000
 240 21 010345000
 240 22 020355000
 240 23 010444000
 240 24 020454000
 241 01 020444000
 241 02 020414000
 241 03 020354000
 241 04 020344000
 241 05 030334000
 241 06 030314000
 241 07 020294000
 241 08 030254000
 241 09 030284000
 241 10 030303000
 241 11 020233000
 241 12 010233000
 241 13 160324000
 241 14 150445000
 241 15 150575000
 241 16 150594000
 241 17 150594000
 241 18 150594000
 241 19 150455000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-183	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

241 20 010285000
 241 21 030235000
 241 22 020325000
 241 23 020324000
 241 24 020344000
 242 01 020304000
 242 02 020305000
 242 03 020295000
 242 04 030204000
 242 05 030135000
 242 06 010214000
 242 07 160314000
 242 08 160344000
 242 09 160381000
 242 10 160381000
 242 11 150371000
 242 12 150384000
 242 13 160364000
 242 14 150474000
 242 15 150594000
 242 16 150673000
 242 17 150684000
 242 18 150584000
 242 19 150585000
 242 20 160535000
 242 21 160475000
 242 22 160384000
 242 23 160344000
 242 24 160394000
 243 01 160324000
 243 02 160354000
 243 03 150235000
 243 04 140195000
 243 05 120145000
 243 06 120176000
 243 07 120215000
 243 08 130254000
 243 09 130334000
 243 10 130214000
 243 11 130104005
 243 12 130154023
 243 13 120295003
 243 14 140374000
 243 15 150384000
 243 16 160544011
 243 17 150524000
 243 18 160444000
 243 19 120175000
 243 20 130225000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-184	of J-243

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

Prepared by		Date	
Reviewed by		Date	
Approved by		Date	

- 243 21 120215000
- 243 22 110255000
- 243 23 110325000
- 243 24 100444009
- 244 01 100424004
- 244 02 100494001
- 244 03 090434000
- 244 04 090495000
- 244 05 080554000
- 244 06 080585000
- 244 07 080505000
- 244 08 070494000
- 244 09 080594000
- 244 10 080634000
- 244 11 070594000
- 244 12 070514000
- 244 13 070514000
- 244 14 070514000
- 244 15 070504000
- 244 16 070554000
- 244 17 070454000
- 244 18 070355000
- 244 19 080305000
- 244 20 080285000
- 244 21 070195000
- 244 22 060225000
- 244 23 070285000
- 244 24 090316000
- 245 01 090276000
- 245 02 090306000
- 245 03 090255000
- 245 04 090236000
- 245 05 080266000
- 245 06 090246000
- 245 07 090266000
- 245 08 100245000
- 245 09 080324000
- 245 10 080304000
- 245 11 090294000
- 245 12 080244000
- 245 13 080244000
- 245 14 090264000
- 245 15 080284000
- 245 16 070334000
- 245 17 080315000
- 245 18 070285000
- 245 19 070265000
- 245 20 070215000
- 245 21 060185000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-185	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

245 22 070196000
 245 23 080216000
 245 24 090276000
 246 01 100286000
 246 02 100306000
 246 03 100266000
 246 04 100326000
 246 05 100326000
 246 06 100326000
 246 07 100305000
 246 08 110414000
 246 09 110424000
 246 10 110313000
 246 11 110223000
 246 12 120163000
 246 13 040234000
 246 14 070194000
 246 15 080264000
 246 16 080294000
 246 17 100174000
 246 18 150434000
 246 19 150464000
 246 20 140355000
 246 21 130275000
 246 22 130135000
 246 23 120155000
 246 24 110205000
 247 01 110205000
 247 02 100205000
 247 03 100255000
 247 04 110276000
 247 05 110286000
 247 06 110316000
 247 07 110296000
 247 08 110335000
 247 09 110254000
 247 10 130174000
 247 11 010184000
 247 12 010223000
 247 13 020233000
 247 14 010184000
 247 15 160194000
 247 16 160244000
 247 17 160314000
 247 18 150314000
 247 19 160374000
 247 20 160334000
 247 21 140285000
 247 22 140275000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-186	of J-243

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

Prepared by		Date	
Reviewed by		Date	
Approved by		Date	

- 247 23 140226000
- 247 24 130136000
- 248 01 110096000
- 248 02 110156000
- 248 03 110176000
- 248 04 110175000
- 248 05 100205000
- 248 06 110155000
- 248 07 100175000
- 248 08 100135000
- 248 09 090114000
- 248 10 100274000
- 248 11 100264000
- 248 12 100184000
- 248 13 110174000
- 248 14 030213000
- 248 15 020204000
- 248 16 020154000
- 248 17 010144000
- 248 18 160154000
- 248 19 150165000
- 248 20 160135000
- 248 21 090085000
- 248 22 120125000
- 248 23 080146000
- 248 24 120136000
- 249 01 140145000
- 249 02 130116000
- 249 03 120136000
- 249 04 110186000
- 249 05 120246000
- 249 06 110276000
- 249 07 110285000
- 249 08 120364000
- 249 09 120444000
- 249 10 120494000
- 249 11 120573000
- 249 12 120463000
- 249 13 120502000
- 249 14 120543000
- 249 15 120524000
- 249 16 120464000
- 249 17 120374000
- 249 18 120344000
- 249 19 120345000
- 249 20 120375000
- 249 21 110345000
- 249 22 120315000
- 249 23 120255000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-187	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

249 24 110255000
250 01 100315000
250 02 100415000
250 03 110345000
250 04 110315000
250 05 110345000
250 06 110365000
250 07 110465000
250 08 110514000
250 09 110484000
250 10 110434000
250 11 120393000
250 12 130401000
250 13 140473000
250 14 140414000
250 15 140474000
250 16 140464000
250 17 140424000
250 18 130274000
250 19 130175000
250 20 130165000
250 21 120185000
250 22 110245000
250 23 110235000
250 24 100255000
251 01 110276000
251 02 110275000
251 03 110305000
251 04 110345000
251 05 110325000
251 06 120144000
251 07 120184000
251 08 130184000
251 09 120234000
251 10 140161000
251 11 010202000
251 12 020234000
251 13 010244000
251 14 010302000
251 15 160462000
251 16 160483000
251 17 150454000
251 18 150454000
251 19 160394000
251 20 140245000
251 21 130215000
251 22 120135000
251 23 110255000
251 24 110235000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-188	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

252 01 110135000
252 02 100165000
252 03 100215000
252 04 100245000
252 05 100225000
252 06 100195000
252 07 090134000
252 08 100134000
252 09 150103000
252 10 160261000
252 11 150421000
252 12 150542000
252 13 150642000
252 14 150664000
252 15 150644000
252 16 150724000
252 17 150654000
252 18 140584000
252 19 140544000
252 20 140644000
252 21 140664000
252 22 140724000
252 23 150864000
252 24 151014000
253 01 151044000
253 02 151094000
253 03 151004000
253 04 150934000
253 05 150945010
253 06 160764000
253 07 150874000
253 08 160895000
253 09 160784000
253 10 010754000
253 11 010924001
253 12 010904000
253 13 020924000
253 14 020674001
253 15 020844000
253 16 030724000
253 17 040524000
253 18 040514000
253 19 050514000
253 20 050474000
253 21 050465000
253 22 050485000
253 23 050425000
253 24 050424000
254 01 050344000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-189	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

254 02 060315000
254 03 060295000
254 04 060345000
254 05 060305000
254 06 060235000
254 07 060274000
254 08 060354000
254 09 060384000
254 10 070393000
254 11 070393000
254 12 080373000
254 13 080304000
254 14 090284000
254 15 080304000
254 16 090254000
254 17 080274000
254 18 090215000
254 19 080275000
254 20 090276000
254 21 100265000
254 22 100196000
254 23 100175000
254 24 100116000
255 01 090186000
255 02 090246000
255 03 090286000
255 04 100326000
255 05 110326000
255 06 110305000
255 07 100225000
255 08 110235000
255 09 110284000
255 10 130244000
255 11 120264000
255 12 120234000
255 13 120214000
255 14 130174000
255 15 110204000
255 16 120214000
255 17 120244000
255 18 120235000
255 19 120215000
255 20 130165000
255 21 130185000
255 22 130175000
255 23 130125000
255 24 110125000
256 01 110175000
256 02 090215000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-190	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

256 03 100196000
256 04 100206000
256 05 100227000
256 06 110237000
256 07 100197000
256 08 080135000
256 09 100114000
256 10 010174000
256 11 040224000
256 12 060174000
256 13 020144000
256 14 010224000
256 15 160184000
256 16 160214000
256 17 160224000
256 18 160254000
256 19 160354000
256 20 010434000
256 21 010464000
256 22 020494000
256 23 020424000
256 24 030404000
257 01 030374000
257 02 040355000
257 03 060175000
257 04 060175000
257 05 050215000
257 06 060175000
257 07 060175000
257 08 080194000
257 09 080204000
257 10 080174000
257 11 090214000
257 12 090143000
257 13 090223000
257 14 070283000
257 15 080244000
257 16 080214000
257 17 080144000
257 18 090075000
257 19 060085000
257 20 160165000
257 21 140196000
257 22 020305000
257 23 020195000
257 24 010244000
258 01 030254000
258 02 040175000
258 03 130175000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-191	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

258 04 130186000
258 05 120236000
258 06 110255000
258 07 110255000
258 08 120285000
258 09 120234000
258 10 140363000
258 11 140373000
258 12 140314005
258 13 130355001
258 14 130315000
258 15 130254000
258 16 140325000
258 17 140435000
258 18 130265000
258 19 130195000
258 20 130205000
258 21 130175000
258 22 120205000
258 23 120225000
258 24 120245000
259 01 120245000
259 02 110265000
259 03 110305000
259 04 110305000
259 05 110305000
259 06 100335000
259 07 100375000
259 08 110384000
259 09 110364004
259 10 110384000
259 11 120294000
259 12 130204000
259 13 120214001
259 14 120244000
259 15 120234000
259 16 110224000
259 17 110244000
259 18 120294001
259 19 110285000
259 20 110294000
259 21 110284000
259 22 110294000
259 23 110304000
259 24 110304000
260 01 110234000
260 02 100174000
260 03 090154000
260 04 100105000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-192	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

260 05 110094000
260 06 090114000
260 07 110064000
260 08 090074000
260 09 070104000
260 10 050151000
260 11 060151000
260 12 080224000
260 13 080184000
260 14 080144000
260 15 070184000
260 16 050274000
260 17 040224000
260 18 030204000
260 19 020204000
260 20 010285000
260 21 010405000
260 22 010445000
260 23 010464000
260 24 010395000
261 01 020345000
261 02 020235000
261 03 020255000
261 04 020285000
261 05 030335000
261 06 030235000
261 07 020175000
261 08 010244000
261 09 150264000
261 10 150334000
261 11 150424000
261 12 150574000
261 13 150642000
261 14 150754000
261 15 150854000
261 16 150914000
261 17 150844000
261 18 150814000
261 19 150804000
261 20 150864000
261 21 150894000
261 22 150894000
261 23 150964000
261 24 150904000
262 01 150875004
262 02 150975002
262 03 151255011
262 04 161065000
262 05 160594000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-193	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

262 06 160594000
 262 07 160594000
 262 08 160524000
 262 09 150454000
 262 10 090774003
 262 11 100954000
 262 12 100974000
 262 13 100814001
 262 14 090884009
 262 15 090794000
 262 16 090824002
 262 17 090824000
 262 18 100684000
 262 19 100675000
 262 20 090725001
 262 21 090675000
 262 22 090575000
 262 23 090615000
 262 24 090595000
 263 01 090545000
 263 02 090545000
 263 03 100435000
 263 04 100435000
 263 05 100595000
 263 06 100505000
 263 07 090565000
 263 08 100674000
 263 09 100674000
 263 10 090653000
 263 11 090652000
 263 12 090601000
 263 13 090572000
 263 14 080572000
 263 15 090523000
 263 16 090504000
 263 17 090454000
 263 18 090345000
 263 19 090356000
 263 20 090366000
 263 21 090336000
 263 22 100356000
 263 23 100306000
 263 24 100326000
 264 01 100365000
 264 02 100315000
 264 03 090325000
 264 04 090345000
 264 05 100295000
 264 06 090315000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-194	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

264 07 090315000
264 08 100404000
264 09 110454000
264 10 110304000
264 11 110253000
264 12 100214000
264 13 090244000
264 14 090264000
264 15 080294000
264 16 090194000
264 17 090224000
264 18 080135000
264 19 060235000
264 20 050265000
264 21 050295000
264 22 050255000
264 23 060186000
264 24 050266000
265 01 060305000
265 02 050305000
265 03 050255000
265 04 060185000
265 05 060215000
265 06 060245000
265 07 070245000
265 08 070215000
265 09 060194000
265 10 060204000
265 11 070234000
265 12 070284000
265 13 080214000
265 14 090164000
265 15 080254000
265 16 090264000
265 17 080184000
265 18 070215000
265 19 050245000
265 20 060226000
265 21 050186000
265 22 050206000
265 23 060207000
265 24 060256000
266 01 070257000
266 02 070257000
266 03 070217000
266 04 060247000
266 05 070297000
266 06 070226000
266 07 070316000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-195	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

266 08 080255000
266 09 080345000
266 10 090344000
266 11 080373000
266 12 080334000
266 13 090354000
266 14 090384000
266 15 080334000
266 16 070384000
266 17 060374000
266 18 060345000
266 19 060345000
266 20 070386000
266 21 070326000
266 22 060346000
266 23 070356000
266 24 080317000
267 01 090317000
267 02 080347000
267 03 080316000
267 04 090256000
267 05 090316000
267 06 070236000
267 07 070255000
267 08 080255000
267 09 080254000
267 10 100434000
267 11 100344000
267 12 100313000
267 13 110373000
267 14 110263000
267 15 100314000
267 16 090384000
267 17 090305000
267 18 150365000
267 19 160375000
267 20 160384000
267 21 010305000
267 22 010275000
267 23 160235000
267 24 110176000
268 01 100146000
268 02 110156000
268 03 110216000
268 04 110216000
268 05 110146000
268 06 100196000
268 07 100196000
268 08 120146000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-196	of J-243

Client	PSEG Nuclear Development
Project	PSEG ESPA
Proj. No	12380-001
Equip. No.	

Prepared by		Date	
Reviewed by		Date	
Approved by		Date	

268 09 140144000
 268 10 010204000
 268 11 010283000
 268 12 010351000
 268 13 160321000
 268 14 160431000
 268 15 150592000
 268 16 150583000
 268 17 160584000
 268 18 160604000
 268 19 160534000
 268 20 150455000
 268 21 140325000
 268 22 140315000
 268 23 140246000
 268 24 140206000
 269 01 130146000
 269 02 140096000
 269 03 110085000
 269 04 100125000
 269 05 090145000
 269 06 110186000
 269 07 110146000
 269 08 100095000
 269 09 050134000
 269 10 020174000
 269 11 020214000
 269 12 020214000
 269 13 010242000
 269 14 160264000
 269 15 160274000
 269 16 160304000
 269 17 150245000
 269 18 160354000
 269 19 010324000
 269 20 010375000
 269 21 010464000
 269 22 020455000
 269 23 020415000
 269 24 030314000
 270 01 030255000
 270 02 030225000
 270 03 030255000
 270 04 030235000
 270 05 050135000
 270 06 080155000
 270 07 080175000
 270 08 080114000
 270 09 090214000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-197	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

270 10 110314000
 270 11 100324000
 270 12 100344000
 270 13 100264000
 270 14 090284000
 270 15 080314000
 270 16 080264000
 270 17 080175000
 270 18 070095000
 270 19 060045000
 270 20 070135000
 270 21 160095000
 270 22 160075000
 270 23 090116000
 270 24 100156000
 271 01 090106000
 271 02 090136000
 271 03 100206000
 271 04 100246000
 271 05 100257000
 271 06 110237000
 271 07 110197000
 271 08 120096000
 271 09 130154000
 271 10 140264000
 271 11 160371000
 271 12 160522000
 271 13 150421000
 271 14 160392000
 271 15 150424000
 271 16 160414000
 271 17 160414000
 271 18 150215000
 271 19 140205000
 271 20 130135000
 271 21 120165000
 271 22 130175000
 271 23 130175000
 271 24 130225000
 272 01 130235005
 272 02 140245000
 272 03 150275000
 272 04 150344000
 272 05 150264000
 272 06 150325000
 272 07 150424017
 272 08 150374002
 272 09 150414000
 272 10 150365000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-198	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

272 11 150335000
 272 12 150314000
 272 13 140324000
 272 14 130414031
 272 15 140634028
 272 16 150684000
 272 17 150714003
 272 18 140664016
 272 19 130424051
 272 20 140544038
 272 21 110734049
 272 22 101014006
 272 23 101024004
 272 24 100924006
 273 01 100774002
 273 02 090654001
 273 03 080684000
 273 04 090724000
 273 05 080685000
 273 06 090675000
 273 07 090605000
 273 08 090594000
 273 09 090524000
 273 10 090594000
 273 11 090534000
 273 12 090494000
 273 13 090514000
 273 14 090424000
 273 15 100374000
 273 16 100294000
 273 17 110174000
 273 18 120144000
 273 19 140155001
 273 20 140265000
 273 21 130175000
 273 22 140195000
 273 23 130145000
 273 24 140185000
 274 01 140225000
 274 02 130145000
 274 03 120135000
 274 04 130095000
 274 05 140185000
 274 06 140245000
 274 07 140185000
 274 08 150195000
 274 09 010324000
 274 10 020304001
 274 11 020254001



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-199	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

- 274 12 030184000
- 274 13 030184000
- 274 14 030184000
- 274 15 010224000
- 274 16 160294000
- 274 17 150244000
- 274 18 160214000
- 274 19 100095000
- 274 20 080255000
- 274 21 080216000
- 274 22 100136000
- 274 23 090165000
- 274 24 110155000
- 275 01 100255000
- 275 02 110226000
- 275 03 080095000
- 275 04 070125000
- 275 05 060125000
- 275 06 070175000
- 275 07 070205000
- 275 08 080135000
- 275 09 100084000
- 275 10 020134000
- 275 11 020214000
- 275 12 160204000
- 275 13 160184000
- 275 14 160254000
- 275 15 160344000
- 275 16 160404000
- 275 17 160374000
- 275 18 160394000
- 275 19 010374000
- 275 20 160475000
- 275 21 160574000
- 275 22 160534000
- 275 23 160424000
- 275 24 160444000
- 276 01 010474000
- 276 02 160454000
- 276 03 160444000
- 276 04 160424000
- 276 05 010424000
- 276 06 160464000
- 276 07 160434000
- 276 08 070185004
- 276 09 010345010
- 276 10 160514001
- 276 11 150484000
- 276 12 150634000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-200	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

276 13 150624000
276 14 160614000
276 15 160484000
276 16 160394000
276 17 150354000
276 18 110125000
276 19 100135000
276 20 100105000
276 21 090156000
276 22 090146000
276 23 130105000
276 24 060215000
277 01 070295000
277 02 080315000
277 03 090485000
277 04 090435000
277 05 090365000
277 06 090385000
277 07 090405000
277 08 090484000
277 09 100504000
277 10 100514000
277 11 100404000
277 12 100313000
277 13 090224000
277 14 080213000
277 15 060134000
277 16 060134000
277 17 160094000
277 18 150104000
277 19 160175000
277 20 020265000
277 21 020335000
277 22 020365000
277 23 020365000
277 24 020375000
278 01 020285000
278 02 110086000
278 03 070085000
278 04 070045000
278 05 020195000
278 06 030235000
278 07 040165000
278 08 040214000
278 09 030174000
278 10 030293000
278 11 040253000
278 12 030252000
278 13 030302000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-201	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

278 14 030312000
 278 15 030313000
 278 16 030354000
 278 17 040294000
 278 18 030265000
 278 19 030265000
 278 20 020305000
 278 21 020345000
 278 22 020385000
 278 23 040405000
 278 24 080575000
 279 01 100505000
 279 02 090395000
 279 03 090425000
 279 04 090465000
 279 05 090395000
 279 06 090365000
 279 07 090355000
 279 08 090504000
 279 09 100584000
 279 10 100623000
 279 11 100562000
 279 12 100442000
 279 13 080412000
 279 14 080382000
 279 15 080343000
 279 16 090314000
 279 17 090274000
 279 18 090205000
 279 19 090175000
 279 20 100156000
 279 21 100096000
 279 22 080195000
 279 23 090215000
 279 24 090295000
 280 01 090236000
 280 02 100246000
 280 03 090346000
 280 04 100326000
 280 05 090186000
 280 06 100175000
 280 07 100206000
 280 08 100205000
 280 09 110194000
 280 10 100214000
 280 11 090233000
 280 12 090243000
 280 13 060213000
 280 14 050233000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-202	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

280 15 030234000
280 16 030264000
280 17 040284000
280 18 030324000
280 19 030285000
280 20 030265000
280 21 040305000
280 22 040326000
280 23 040346000
280 24 040316000
281 01 040196000
281 02 050075000
281 03 070085000
281 04 070135000
281 05 060176000
281 06 050206000
281 07 060205000
281 08 060225000
281 09 070224000
281 10 070214000
281 11 080244000
281 12 050194000
281 13 020164000
281 14 040204000
281 15 050213000
281 16 050244000
281 17 040194000
281 18 010215000
281 19 010196000
281 20 010146000
281 21 020125000
281 22 050146000
281 23 070115000
281 24 060086000
282 01 050066000
282 02 090056000
282 03 070066000
282 04 070086000
282 05 100086000
282 06 120056000
282 07 150076000
282 08 030095000
282 09 010115000
282 10 160165000
282 11 150305000
282 12 150354000
282 13 150374000
282 14 150384000
282 15 150485000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-203	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

282 16 150505000
282 17 150544000
282 18 160574000
282 19 160564000
282 20 020295000
282 21 160315000
282 22 160434000
282 23 010385000
282 24 010344000
283 01 010324000
283 02 010325000
283 03 010345000
283 04 010335000
283 05 010335000
283 06 010305000
283 07 010265000
283 08 010295000
283 09 010314000
283 10 020274000
283 11 030234000
283 12 030194000
283 13 030233000
283 14 150264000
283 15 150304000
283 16 150434000
283 17 160424000
283 18 160365000
283 19 010335000
283 20 020275000
283 21 030275000
283 22 030305000
283 23 030295000
283 24 030285000
284 01 030275000
284 02 030235000
284 03 060195000
284 04 070195000
284 05 070245000
284 06 080276000
284 07 090285000
284 08 090295000
284 09 090365000
284 10 080423000
284 11 080472000
284 12 090463000
284 13 080552000
284 14 080582000
284 15 070633000
284 16 070634000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-204	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

284 17 080664000
284 18 080655000
284 19 080615000
284 20 080674000
284 21 090624000
284 22 090734000
284 23 090644000
284 24 090705000
285 01 090575000
285 02 090595000
285 03 090515000
285 04 090515000
285 05 080495000
285 06 080425000
285 07 090535000
285 08 090604000
285 09 090574000
285 10 080592000
285 11 080603000
285 12 080602000
285 13 080512000
285 14 090462000
285 15 090483000
285 16 090464000
285 17 090344000
285 18 090265000
285 19 100346000
285 20 090336000
285 21 090345000
285 22 090405000
285 23 080415000
285 24 070395000
286 01 070375000
286 02 070365000
286 03 070345000
286 04 070315000
286 05 070305000
286 06 070395000
286 07 070465000
286 08 070544000
286 09 070513000
286 10 080522000
286 11 070521000
286 12 070521000
286 13 070491000
286 14 070491000
286 15 070462000
286 16 070424000
286 17 070414000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-205	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

286 18 060405000
286 19 050325000
286 20 050365000
286 21 060415000
286 22 070325000
286 23 070335000
286 24 070255000
287 01 070175000
287 02 040255000
287 03 060205000
287 04 060225000
287 05 060245000
287 06 070186000
287 07 070206000
287 08 090155000
287 09 100174000
287 10 050154000
287 11 160134000
287 12 150154000
287 13 150164000
287 14 160244000
287 15 160204000
287 16 130104000
287 17 150164000
287 18 120165000
287 19 140175000
287 20 130216000
287 21 110256000
287 22 110256000
287 23 110206000
287 24 100256000
288 01 110266000
288 02 120216007
288 03 100205001
288 04 090235002
288 05 090295000
288 06 090344000
288 07 090384000
288 08 100374000
288 09 090314000
288 10 080384000
288 11 080364000
288 12 080394000
288 13 080374000
288 14 090374000
288 15 080284000
288 16 090234000
288 17 100174000
288 18 100135000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-206	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

288 19 080135000
 288 20 100155000
 288 21 100155000
 288 22 120145000
 288 23 140095000
 288 24 130075000
 289 01 160194000
 289 02 020224000
 289 03 020194000
 289 04 150195000
 289 05 150275000
 289 06 140335000
 289 07 150385000
 289 08 160534000
 289 09 150634000
 289 10 150724000
 289 11 150724000
 289 12 150624000
 289 13 160604000
 289 14 010594000
 289 15 160643006
 289 16 160891000
 289 17 160854000
 289 18 010564004
 289 19 030334000
 289 20 050464000
 289 21 070575001
 289 22 060395000
 289 23 050425000
 289 24 050435000
 290 01 050435000
 290 02 040515000
 290 03 040505000
 290 04 030564000
 290 05 030554000
 290 06 030574000
 290 07 030524000
 290 08 030494000
 290 09 030504000
 290 10 030593000
 290 11 030682000
 290 12 030633000
 290 13 030714000
 290 14 030724000
 290 15 030524000
 290 16 030614000
 290 17 050405006
 290 18 050694002
 290 19 040444002



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-207	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

290 20 050515000
290 21 050465000
290 22 040515000
290 23 040555000
290 24 040525000
291 01 040465000
291 02 040395000
291 03 030515000
291 04 030475000
291 05 030465000
291 06 030425000
291 07 030505000
291 08 030524000
291 09 040524000
291 10 040783000
291 11 040802000
291 12 050711000
291 13 050661000
291 14 050682000
291 15 050613000
291 16 050594000
291 17 050464000
291 18 060305000
291 19 060305000
291 20 100295000
291 21 110145000
291 22 110175000
291 23 110195000
291 24 130185000
292 01 140135000
292 02 080055000
292 03 070135000
292 04 090085000
292 05 060205000
292 06 070135000
292 07 070125000
292 08 070115000
292 09 090234000
292 10 080304000
292 11 080194000
292 12 020194000
292 13 160194000
292 14 160214000
292 15 150412000
292 16 150423000
292 17 150514000
292 18 140395000
292 19 140305000
292 20 140265000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-208	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

292 21 140256000
292 22 130156000
292 23 120216003
292 24 120305016
293 01 130295024
293 02 110325035
293 03 110404002
293 04 120384013
293 05 110304001
293 06 110344000
293 07 110354000
293 08 110334000
293 09 100304000
293 10 100384000
293 11 100414000
293 12 100404004
293 13 100434000
293 14 110474000
293 15 110424000
293 16 110494007
293 17 110474003
293 18 110464000
293 19 110454000
293 20 110474000
293 21 110514000
293 22 110464000
293 23 110414000
293 24 110444000
294 01 100494000
294 02 100544000
294 03 100544000
294 04 100464000
294 05 100424000
294 06 100384000
294 07 100424000
294 08 100424000
294 09 100464000
294 10 100394000
294 11 100444000
294 12 110384000
294 13 110354000
294 14 110364000
294 15 100394000
294 16 100374000
294 17 100334000
294 18 100354000
294 19 100294000
294 20 100285000
294 21 100315000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-209	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

294 22 100315000
294 23 100305000
294 24 110265000
295 01 110245000
295 02 100304005
295 03 100364000
295 04 100384000
295 05 100404000
295 06 110414000
295 07 110364000
295 08 110374000
295 09 110344000
295 10 110314000
295 11 110414000
295 12 110384000
295 13 110344000
295 14 110384000
295 15 110394000
295 16 110374000
295 17 110344000
295 18 110304000
295 19 110304000
295 20 110314000
295 21 110354000
295 22 100394000
295 23 110384000
295 24 110404000
296 01 100394000
296 02 100404000
296 03 100434000
296 04 110454000
296 05 100434000
296 06 100394000
296 07 110484000
296 08 100494000
296 09 100464000
296 10 100504000
296 11 100443000
296 12 100453000
296 13 100513000
296 14 110454000
296 15 110424000
296 16 110374000
296 17 110315000
296 18 100195000
296 19 100225000
296 20 090215000
296 21 090235000
296 22 100285000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-210	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

296 23 100315000
296 24 100345000
297 01 090305000
297 02 090305000
297 03 090316000
297 04 100365000
297 05 100345000
297 06 100275000
297 07 100385000
297 08 110544000
297 09 110554000
297 10 110543000
297 11 110492000
297 12 110402000
297 13 100323000
297 14 090353000
297 15 100334000
297 16 110294000
297 17 110225000
297 18 120215000
297 19 120215000
297 20 120205000
297 21 120276000
297 22 110286000
297 23 110286000
297 24 110325000
298 01 110305000
298 02 110275000
298 03 110285000
298 04 110286000
298 05 110285000
298 06 120255000
298 07 110205000
298 08 110295000
298 09 100274000
298 10 110334000
298 11 110294000
298 12 120274000
298 13 120204000
298 14 110134000
298 15 090144000
298 16 090214000
298 17 090144000
298 18 080114000
298 19 090145000
298 20 090135000
298 21 110125000
298 22 120125000
298 23 090105000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-211	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

298 24 110095000
 299 01 110155000
 299 02 110135000
 299 03 110115000
 299 04 100175000
 299 05 090135000
 299 06 100185000
 299 07 110175000
 299 08 100144000
 299 09 090124000
 299 10 070194000
 299 11 060254000
 299 12 080233000
 299 13 090243000
 299 14 090294000
 299 15 080254000
 299 16 080144000
 299 17 100074000
 299 18 060094000
 299 19 050204000
 299 20 070304000
 299 21 070274000
 299 22 080195000
 299 23 080205000
 299 24 080155000
 300 01 080205000
 300 02 070215000
 300 03 070225000
 300 04 090215000
 300 05 090175000
 300 06 080185000
 300 07 070295000
 300 08 080255000
 300 09 080364000
 300 10 080453000
 300 11 100424000
 300 12 100424000
 300 13 100334000
 300 14 100254000
 300 15 100224000
 300 16 080334000
 300 17 080315000
 300 18 080265000
 300 19 090265000
 300 20 080325000
 300 21 080305000
 300 22 070275000
 300 23 070265000
 300 24 070305000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-212	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

301 01 070315000
301 02 080326000
301 03 080316000
301 04 070315000
301 05 080265000
301 06 080265000
301 07 090275000
301 08 090225000
301 09 090214000
301 10 080284000
301 11 080273000
301 12 090313000
301 13 100353000
301 14 100344000
301 15 100344000
301 16 100304000
301 17 110175000
301 18 100135000
301 19 080155000
301 20 100136000
301 21 140075000
301 22 060165000
301 23 060186000
301 24 070216000
302 01 080235000
302 02 090245000
302 03 110296000
302 04 110276000
302 05 110306000
302 06 100275000
302 07 100265000
302 08 110315000
302 09 110414000
302 10 110453000
302 11 120263000
302 12 120184000
302 13 030233000
302 14 040223000
302 15 040234000
302 16 010194000
302 17 150444000
302 18 150534000
302 19 150425000
302 20 140335000
302 21 140245000
302 22 140275000
302 23 140305000
302 24 140295000
303 01 160175000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-213	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

303 02 020234000
 303 03 010364000
 303 04 010364000
 303 05 160354000
 303 06 010314000
 303 07 010304000
 303 08 160334000
 303 09 160344000
 303 10 010354000
 303 11 160434000
 303 12 010384000
 303 13 020324000
 303 14 160224000
 303 15 150244000
 303 16 140214000
 303 17 140225000
 303 18 150325000
 303 19 160394000
 303 20 010414000
 303 21 010444000
 303 22 010354000
 303 23 010414000
 303 24 010384000
 304 01 160404000
 304 02 160394000
 304 03 010264005
 304 04 160184004
 304 05 160384001
 304 06 160434000
 304 07 160274012
 304 08 160354000
 304 09 010314000
 304 10 010304000
 304 11 020254000
 304 12 020234000
 304 13 010245000
 304 14 010195000
 304 15 150255000
 304 16 150315000
 304 17 150346000
 304 18 160275000
 304 19 150395000
 304 20 150405000
 304 21 150435000
 304 22 150446000
 304 23 160326000
 304 24 030266000
 305 01 040286000
 305 02 030286000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-214	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

305 03 030296000
305 04 030256000
305 05 030346000
305 06 030315000
305 07 030256000
305 08 040266000
305 09 040305000
305 10 040375000
305 11 040495000
305 12 050654000
305 13 050634000
305 14 040544000
305 15 040555000
305 16 040455000
305 17 040365000
305 18 050435000
305 19 050366000
305 20 050365000
305 21 060346000
305 22 060385000
305 23 060345000
305 24 060386000
306 01 050385000
306 02 050336000
306 03 060345000
306 04 060345000
306 05 060345000
306 06 060395000
306 07 060315000
306 08 060354000
306 09 060384000
306 10 060424000
306 11 070452000
306 12 070471000
306 13 070422000
306 14 070412000
306 15 070374000
306 16 070304000
306 17 080225000
306 18 080255000
306 19 100186000
306 20 090156000
306 21 090136000
306 22 090106000
306 23 120076000
306 24 120186000
307 01 120276000
307 02 120175000
307 03 120125000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-215	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

307 04 100125000
 307 05 110145000
 307 06 110305000
 307 07 110276000
 307 08 110266000
 307 09 130204000
 307 10 140324000
 307 11 140443000
 307 12 150561000
 307 13 150623000
 307 14 150614000
 307 15 150544000
 307 16 150484000
 307 17 150385000
 307 18 140305000
 307 19 140345000
 307 20 150265000
 307 21 150286000
 307 22 150336000
 307 23 080166000
 307 24 080146000
 308 01 040186000
 308 02 040236000
 308 03 050315000
 308 04 040365000
 308 05 050405000
 308 06 070545000
 308 07 080795000
 308 08 080804000
 308 09 080724000
 308 10 080693000
 308 11 080662000
 308 12 080652000
 308 13 080601000
 308 14 080562000
 308 15 080534000
 308 16 080424000
 308 17 090275000
 308 18 090266000
 308 19 090256000
 308 20 100236000
 308 21 090185000
 308 22 090205000
 308 23 090215000
 308 24 090306000
 309 01 090336000
 309 02 100316000
 309 03 100175000
 309 04 110285000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-216	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

309 05 110305000
309 06 110335000
309 07 120215000
309 08 120115000
309 09 110114000
309 10 110115000
309 11 110125006
309 12 110105007
309 13 100095017
309 14 060125013
309 15 140185005
309 16 150744012
309 17 150804005
309 18 150534012
309 19 070264032
309 20 070174006
309 21 050274000
309 22 040364000
309 23 040554000
309 24 040534000
310 01 040554000
310 02 050625000
310 03 050595000
310 04 050665000
310 05 060655000
310 06 061005000
310 07 060665000
310 08 060664000
310 09 060734000
310 10 070864000
310 11 070843000
310 12 060772000
310 13 060812000
310 14 060743000
310 15 060664000
310 16 060644000
310 17 060564000
310 18 060415000
310 19 050315000
310 20 050305000
310 21 050345000
310 22 050405000
310 23 050345000
310 24 050345000
311 01 050385000
311 02 050345000
311 03 050375000
311 04 050385000
311 05 050415000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-217	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

311 06 050395000
311 07 040365000
311 08 030355000
311 09 040594000
311 10 040693000
311 11 040763000
311 12 040782000
311 13 030743000
311 14 040673000
311 15 040664000
311 16 040624000
311 17 030525000
311 18 020445000
311 19 020415000
311 20 010375000
311 21 020385000
311 22 030335000
311 23 030335000
311 24 040335000
312 01 040375000
312 02 040346000
312 03 040326000
312 04 040296000
312 05 030256000
312 06 030216000
312 07 050116000
312 08 030235000
312 09 010175000
312 10 150305000
312 11 150375000
312 12 150375000
312 13 010345000
312 14 020455000
312 15 020555000
312 16 020485000
312 17 020435000
312 18 020395000
312 19 010375000
312 20 160275000
312 21 160305000
312 22 020316000
312 23 040425000
312 24 050375000
313 01 050416000
313 02 060445000
313 03 070675000
313 04 080745000
313 05 080695000
313 06 080565000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-218	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

313 07 080635000
313 08 080625000
313 09 080604000
313 10 080584000
313 11 080673000
313 12 080631000
313 13 080601000
313 14 070594000
313 15 070664000
313 16 070514000
313 17 070415000
313 18 080485000
313 19 080425000
313 20 080325000
313 21 090265000
313 22 080205000
313 23 090175000
313 24 070295000
314 01 070295000
314 02 070405000
314 03 070395000
314 04 070365000
314 05 070415000
314 06 080455000
314 07 100335000
314 08 100345000
314 09 090514000
314 10 080552000
314 11 080582000
314 12 080612000
314 13 080542000
314 14 080505000
314 15 080527000
314 16 080557000
314 17 090475000
314 18 080405000
314 19 100335000
314 20 110215000
314 21 110245000
314 22 110225000
314 23 110205000
314 24 110235000
315 01 110246000
315 02 110176000
315 03 110176000
315 04 120145000
315 05 120235000
315 06 110276000
315 07 110246000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-219	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

315 08 110206000
315 09 120204000
315 10 130114000
315 11 160223000
315 12 160252016
315 13 150331000
315 14 150381000
315 15 150382000
315 16 150424000
315 17 160444000
315 18 160624000
315 19 160634000
315 20 010704000
315 21 010634000
315 22 010604000
315 23 010604000
315 24 010644000
316 01 010604000
316 02 010624000
316 03 010574000
316 04 010554000
316 05 010554000
316 06 010534000
316 07 020434000
316 08 020444000
316 09 020484000
316 10 020514000
316 11 020474000
316 12 020403000
316 13 020343000
316 14 020354000
316 15 020334000
316 16 030304000
316 17 030255000
316 18 010205000
316 19 030205000
316 20 030195000
316 21 090136000
316 22 130216000
316 23 160165000
316 24 120196000
317 01 110236000
317 02 100247000
317 03 110176000
317 04 110295000
317 05 110295000
317 06 110345000
317 07 110355000
317 08 110354004



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-220	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

317 09 100384009
317 10 110474010
317 11 110514009
317 12 100484018
317 13 110564006
317 14 110544005
317 15 110514007
317 16 110554007
317 17 110554004
317 18 100504004
317 19 100594003
317 20 100544008
317 21 100674012
317 22 110644009
317 23 100614010
317 24 100604009
318 01 100664006
318 02 100694005
318 03 100704003
318 04 100674000
318 05 090654000
318 06 090604000
318 07 100574000
318 08 100604000
318 09 100634000
318 10 100644000
318 11 090624000
318 12 090634000
318 13 090733000
318 14 090674000
318 15 090664000
318 16 080594000
318 17 090555000
318 18 090465000
318 19 090445000
318 20 090425000
318 21 090535000
318 22 090465000
318 23 090495000
318 24 090525000
319 01 090455000
319 02 090445000
319 03 090415000
319 04 090445000
319 05 090495000
319 06 090555000
319 07 090505000
319 08 090475000
319 09 090524000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-221	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

319 10 090484000
 319 11 090514000
 319 12 080454000
 319 13 080424000
 319 14 080404000
 319 15 080384000
 319 16 070384000
 319 17 070455000
 319 18 070365000
 319 19 060305000
 319 20 060335000
 319 21 060325000
 319 22 070295000
 319 23 060315000
 319 24 060305000
 320 01 060355000
 320 02 070335000
 320 03 070355000
 320 04 070355000
 320 05 060345000
 320 06 070375000
 320 07 070326000
 320 08 070335000
 320 09 070324000
 320 10 060354000
 320 11 080333000
 320 12 080253000
 320 13 060214000
 320 14 040224000
 320 15 070394000
 320 16 070314000
 320 17 060255000
 320 18 060305000
 320 19 060345000
 320 20 070346000
 320 21 070266000
 320 22 050156000
 320 23 050226000
 320 24 060346000
 321 01 070346000
 321 02 070347000
 321 03 070166000
 321 04 060286000
 321 05 070246000
 321 06 080316000
 321 07 080286000
 321 08 090257000
 321 09 090095000
 321 10 070214000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-222	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

321 11 070253000
321 12 060234000
321 13 060184000
321 14 020154000
321 15 160135000
321 16 150165000
321 17 160146000
321 18 030125000
321 19 060156000
321 20 060206000
321 21 050146000
321 22 030117000
321 23 060097000
321 24 100047000
322 01 080147000
322 02 070217000
322 03 070307000
322 04 080347000
322 05 080276000
322 06 070286000
322 07 090256000
322 08 090226000
322 09 080245000
322 10 080304000
322 11 080324000
322 12 080304000
322 13 090333000
322 14 090314000
322 15 090214000
322 16 080124000
322 17 060175000
322 18 060205000
322 19 060145000
322 20 040095000
322 21 040136000
322 22 030126000
322 23 150166000
322 24 020136000
323 01 020136000
323 02 030166000
323 03 030156000
323 04 150136000
323 05 140086000
323 06 160245000
323 07 010275000
323 08 030225000
323 09 030125000
323 10 150155000
323 11 160235000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-223	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

323 12 160255000
 323 13 020214000
 323 14 040264000
 323 15 050214000
 323 16 040165000
 323 17 020135000
 323 18 010115000
 323 19 010146000
 323 20 010126000
 323 21 020135000
 323 22 030186000
 323 23 040115000
 323 24 090075000
 324 01 050075000
 324 02 030135000
 324 03 040126000
 324 04 080086000
 324 05 090157000
 324 06 010126000
 324 07 030166000
 324 08 060106000
 324 09 060046000
 324 10 060055000
 324 11 070125000
 324 12 040144000
 324 13 050144000
 324 14 060194000
 324 15 070134000
 324 16 040105000
 324 17 020065000
 324 18 160055000
 324 19 020065000
 324 20 040096000
 324 21 030076000
 324 22 060096000
 324 23 010056000
 324 24 100126000
 325 01 100076000
 325 02 120105000
 325 03 120095000
 325 04 110105000
 325 05 090135000
 325 06 060075000
 325 07 110165000
 325 08 130085000
 325 09 120085000
 325 10 140224000
 325 11 150284000
 325 12 160305000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-224	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

325 13 150435000
325 14 150424000
325 15 150434000
325 16 150305001
325 17 140255000
325 18 140245000
325 19 120105000
325 20 100145010
325 21 100185001
325 22 110135005
325 23 090165001
325 24 090175000
326 01 090194000
326 02 080224000
326 03 090244000
326 04 090274000
326 05 080284000
326 06 090284000
326 07 090224000
326 08 090284000
326 09 090264000
326 10 090224000
326 11 100164000
326 12 100144000
326 13 100084000
326 14 030124000
326 15 010125000
326 16 080085000
326 17 010085000
326 18 160145000
326 19 160145000
326 20 160115000
326 21 020145000
326 22 120085000
326 23 140086000
326 24 160175000
327 01 010205000
327 02 160215000
327 03 030085000
327 04 080085000
327 05 100056000
327 06 070096000
327 07 100116000
327 08 090086001
327 09 020056000
327 10 020086000
327 11 010115000
327 12 030135000
327 13 160114000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-225	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

327 14 150074000
327 15 140084000
327 16 160195000
327 17 160215000
327 18 150095001
327 19 150075001
327 20 150175001
327 21 110145001
327 22 090075000
327 23 140075000
327 24 130085000
328 01 110145000
328 02 110125000
328 03 110115000
328 04 100155000
328 05 100195000
328 06 110205000
328 07 120135000
328 08 120145000
328 09 110174000
328 10 110264000
328 11 110294000
328 12 120244000
328 13 120194000
328 14 120234000
328 15 120264000
328 16 120214000
328 17 120184000
328 18 120184000
328 19 120145000
328 20 120175000
328 21 120134000
328 22 120134000
328 23 120145000
328 24 130155000
329 01 130164000
329 02 130174000
329 03 130184000
329 04 120194000
329 05 120164000
329 06 130174000
329 07 130204000
329 08 130215000
329 09 130255001
329 10 140354000
329 11 150464000
329 12 150505000
329 13 150465001
329 14 150535001



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-226	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

329 15 150575000
329 16 150655000
329 17 150565000
329 18 150596000
329 19 150596000
329 20 150606000
329 21 150616000
329 22 150737000
329 23 160667000
329 24 010576000
330 01 020805000
330 02 020775000
330 03 020805000
330 04 020765000
330 05 010605000
330 06 010665000
330 07 010675000
330 08 010575000
330 09 010665000
330 10 030865000
330 11 060604000
330 12 060554002
330 13 050314003
330 14 060734005
330 15 060854000
330 16 060914000
330 17 070854000
330 18 070924000
330 19 060814000
330 20 060964000
330 21 070884000
330 22 070684000
330 23 070664000
330 24 070564000
331 01 060624000
331 02 060574000
331 03 060564000
331 04 070614000
331 05 070485000
331 06 070395000
331 07 060344000
331 08 050434000
331 09 050424000
331 10 050444000
331 11 050453000
331 12 060452000
331 13 060363000
331 14 050333000
331 15 040394000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-227	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

331 16 040404000
 331 17 030414000
 331 18 030344000
 331 19 020424000
 331 20 020495000
 331 21 020465000
 331 22 020445000
 331 23 020445000
 331 24 020435000
 332 01 020425000
 332 02 020465000
 332 03 020425000
 332 04 020385000
 332 05 010345000
 332 06 010395000
 332 07 010455000
 332 08 010495000
 332 09 160484000
 332 10 160434000
 332 11 150462000
 332 12 150603000
 332 13 150703000
 332 14 150744000
 332 15 150724000
 332 16 140724000
 332 17 140534000
 332 18 140504000
 332 19 140445000
 332 20 140355000
 332 21 140345000
 332 22 140545000
 332 23 140635006
 332 24 140634014
 333 01 140714002
 333 02 140814000
 333 03 140985006
 333 04 141015007
 333 05 150915047
 333 06 150995016
 333 07 150765007
 333 08 160686002
 333 09 150406000
 333 10 150285000
 333 11 150185001
 333 12 070225000
 333 13 060304000
 333 14 070514000
 333 15 070554000
 333 16 070615000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-228	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

333 17 070765000
 333 18 070585000
 333 19 070785000
 333 20 070765000
 333 21 070675000
 333 22 070535000
 333 23 070435000
 333 24 060355000
 334 01 060365000
 334 02 050405000
 334 03 060395000
 334 04 060405000
 334 05 060355000
 334 06 060335000
 334 07 070375000
 334 08 070395000
 334 09 080524000
 334 10 090474000
 334 11 090544000
 334 12 080532000
 334 13 080552000
 334 14 080503000
 334 15 080444000
 334 16 080284000
 334 17 070215000
 334 18 070215000
 334 19 070275000
 334 20 080225000
 334 21 090145000
 334 22 140135000
 334 23 060165000
 334 24 070195000
 335 01 080205000
 335 02 090155000
 335 03 100105000
 335 04 100085000
 335 05 110116000
 335 06 080145000
 335 07 100236000
 335 08 100166000
 335 09 130085000
 335 10 150124000
 335 11 020164000
 335 12 160164000
 335 13 160244000
 335 14 150354000
 335 15 150304000
 335 16 150304000
 335 17 140215000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-229 of J-243	

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

335 18 140235000
335 19 160404000
335 20 160454000
335 21 160424000
335 22 160474000
335 23 160574000
335 24 160584000
336 01 160664000
336 02 160494003
336 03 010444006
336 04 160564004
336 05 160604014
336 06 160753001
336 07 160804002
336 08 010885006
336 09 011045004
336 10 021105000
336 11 050965005
336 12 050744000
336 13 051164000
336 14 051184000
336 15 061044000
336 16 061004000
336 17 060934000
336 18 060814000
336 19 060744000
336 20 060594000
336 21 060554000
336 22 050465000
336 23 060405000
336 24 050345000
337 01 050295000
337 02 050345000
337 03 050415000
337 04 060345000
337 05 050335000
337 06 040345000
337 07 040335000
337 08 040325000
337 09 040374000
337 10 050414000
337 11 050523000
337 12 060423000
337 13 060383000
337 14 070303000
337 15 060214000
337 16 050234000
337 17 040245000
337 18 040175000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-230	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

337 19 160165000
337 20 140256000
337 21 130196000
337 22 120227000
337 23 120227000
337 24 110237000
338 01 120167000
338 02 010146000
338 03 050215000
338 04 060255000
338 05 050345000
338 06 060395000
338 07 050305000
338 08 040305000
338 09 040405000
338 10 050504000
338 11 060693000
338 12 060673000
338 13 060634000
338 14 070574000
338 15 060584000
338 16 060474000
338 17 060425000
338 18 060345000
338 19 060345000
338 20 070335000
338 21 070285000
338 22 070305000
338 23 070305000
338 24 060255000
339 01 070265000
339 02 080275000
339 03 100175000
339 04 120065000
339 05 140155000
339 06 130245000
339 07 140245000
339 08 150165000
339 09 010125000
339 10 020254000
339 11 010224000
339 12 010213000
339 13 010283000
339 14 020343000
339 15 030384000
339 16 020484000
339 17 010454000
339 18 020385000
339 19 010405000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X
<input type="checkbox"/>	Non-Safety Related	

Calc No.	2009-11222	
Rev.	2	Date
Page	J-231	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

339 20 020385000
339 21 020435000
339 22 020494000
339 23 020515000
339 24 030445000
340 01 030355000
340 02 030405000
340 03 040396000
340 04 040415000
340 05 040336000
340 06 040366000
340 07 040386000
340 08 050375000
340 09 050415000
340 10 050384000
340 11 050443000
340 12 060392000
340 13 060403000
340 14 060393000
340 15 050394000
340 16 050344000
340 17 040245000
340 18 040165000
340 19 050145000
340 20 050136000
340 21 130136000
340 22 140156000
340 23 140076000
340 24 100217000
341 01 110316000
341 02 110285000
341 03 100215000
341 04 110245000
341 05 110195000
341 06 110225000
341 07 120345000
341 08 130245000
341 09 130275000
341 10 130274000
341 11 130204000
341 12 130214000
341 13 150425000
341 14 150405000
341 15 150435000
341 16 150415000
341 17 150435000
341 18 150405000
341 19 150335000
341 20 150206000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-232	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

341 21 110145000
 341 22 110235000
 341 23 100265000
 341 24 100345000
 342 01 100305000
 342 02 110364000
 342 03 110364000
 342 04 110404000
 342 05 100214003
 342 06 110304002
 342 07 110304002
 342 08 110284008
 342 09 110264011
 342 10 120285007
 342 11 120195000
 342 12 130125002
 342 13 110135002
 342 14 140395000
 342 15 150575000
 342 16 150676000
 342 17 150656000
 342 18 150597000
 342 19 150657000
 342 20 150577000
 342 21 150447000
 342 22 020436000
 342 23 030516000
 342 24 040426000
 343 01 030495006
 343 02 050345000
 343 03 050425000
 343 04 050505000
 343 05 040385000
 343 06 040306000
 343 07 050355000
 343 08 050345000
 343 09 040345000
 343 10 050444000
 343 11 050514000
 343 12 060564000
 343 13 060514000
 343 14 060514000
 343 15 070494000
 343 16 070385000
 343 17 080226000
 343 18 080316000
 343 19 080266000
 343 20 080256000
 343 21 070225000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-233	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

343 22 070215000
 343 23 080275000
 343 24 090256000
 344 01 090235000
 344 02 090286000
 344 03 110166000
 344 04 120136000
 344 05 120176000
 344 06 120156000
 344 07 130126000
 344 08 140175000
 344 09 120145000
 344 10 120214000
 344 11 120214000
 344 12 130284000
 344 13 140284000
 344 14 140134000
 344 15 150184000
 344 16 130225011
 344 17 130235006
 344 18 130235004
 344 19 140335006
 344 20 130344004
 344 21 140264006
 344 22 140304004
 344 23 140424000
 344 24 140404000
 345 01 130275001
 345 02 110215000
 345 03 120274000
 345 04 110244000
 345 05 120214000
 345 06 120324002
 345 07 120394000
 345 08 110424000
 345 09 120364001
 345 10 120304000
 345 11 120304000
 345 12 120284001
 345 13 130275000
 345 14 130375000
 345 15 140515000
 345 16 150645000
 345 17 150516000
 345 18 150406000
 345 19 150186000
 345 20 100106000
 345 21 080156000
 345 22 060136000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-234	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

345 23 050325000
345 24 040355000
346 01 040464000
346 02 050374000
346 03 040245000
346 04 040225000
346 05 040235000
346 06 040214000
346 07 040135000
346 08 040095000
346 09 020114000
346 10 010174000
346 11 030184004
346 12 040304002
346 13 040424003
346 14 040404003
346 15 040394000
346 16 040484000
346 17 050405000
346 18 050345000
346 19 050345000
346 20 050415000
346 21 050475000
346 22 050545000
346 23 050454000
346 24 040494000
347 01 050474000
347 02 050494000
347 03 050454000
347 04 050424000
347 05 050464000
347 06 050434000
347 07 050444000
347 08 050424000
347 09 050434000
347 10 050414000
347 11 050424000
347 12 050494000
347 13 050454000
347 14 050474000
347 15 050414000
347 16 050404000
347 17 040304000
347 18 020274000
347 19 010345000
347 20 010444000
347 21 010564000
347 22 010544000
347 23 010464000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-235	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

347 24 020354000
348 01 020384000
348 02 030384000
348 03 030355000
348 04 030365000
348 05 020335000
348 06 020295000
348 07 060215000
348 08 060424001
348 09 040254000
348 10 040574000
348 11 060884000
348 12 060673000
348 13 060743000
348 14 050823000
348 15 060724000
348 16 060634000
348 17 060574000
348 18 060674000
348 19 050604000
348 20 060604000
348 21 060694000
348 22 050674000
348 23 050654000
348 24 050664000
349 01 050574000
349 02 050524000
349 03 050534000
349 04 050494000
349 05 050454000
349 06 050444000
349 07 050424000
349 08 050404000
349 09 060454000
349 10 070644000
349 11 070623000
349 12 070603000
349 13 080632000
349 14 070592000
349 15 070634000
349 16 070584000
349 17 070574000
349 18 070555000
349 19 070475000
349 20 080494000
349 21 080515000
349 22 080574000
349 23 080474000
349 24 090614000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-236	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

350 01 090554000
 350 02 100415000
 350 03 090424000
 350 04 080514000
 350 05 080614000
 350 06 080634000
 350 07 080505000
 350 08 070425000
 350 09 070484000
 350 10 070453000
 350 11 070412000
 350 12 080623000
 350 13 080662000
 350 14 080603000
 350 15 080574000
 350 16 070584000
 350 17 070435000
 350 18 070325000
 350 19 070255000
 350 20 080195000
 350 21 070175000
 350 22 080215000
 350 23 060285000
 350 24 060255000
 351 01 070295000
 351 02 060255000
 351 03 060255000
 351 04 060225000
 351 05 050255000
 351 06 040285000
 351 07 040265000
 351 08 040335000
 351 09 040375000
 351 10 030384000
 351 11 030343000
 351 12 030393000
 351 13 030353000
 351 14 030304000
 351 15 020394000
 351 16 020384000
 351 17 020355000
 351 18 020345000
 351 19 010474000
 351 20 010524000
 351 21 010485000
 351 22 010515000
 351 23 020485000
 351 24 020424000
 352 01 020404000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	X Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-237 of J-243	

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

352 02 020355000
352 03 020305000
352 04 020325000
352 05 040285000
352 06 040325000
352 07 050345000
352 08 050315000
352 09 040215000
352 10 050344000
352 11 050483000
352 12 060543000
352 13 060443000
352 14 060423000
352 15 060424000
352 16 070404000
352 17 070315000
352 18 090266000
352 19 090286000
352 20 090265000
352 21 090255000
352 22 100195000
352 23 100135000
352 24 090135000
353 01 100195000
353 02 110256000
353 03 100255000
353 04 110306000
353 05 110306000
353 06 110296000
353 07 110337000
353 08 110337000
353 09 110196000
353 10 110205000
353 11 120194000
353 12 160164000
353 13 010145000
353 14 020194000
353 15 010244000
353 16 160165000
353 17 020105000
353 18 120115000
353 19 110175000
353 20 110245000
353 21 110196000
353 22 090236000
353 23 090216000
353 24 090096000
354 01 070156000
354 02 080135000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-238	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

354 03 090096000
354 04 130096000
354 05 110066000
354 06 110136000
354 07 120086000
354 08 010215000
354 09 160165000
354 10 030154000
354 11 030114000
354 12 050114000
354 13 040114000
354 14 040154000
354 15 060224001
354 16 070204005
354 17 080154006
354 18 130134001
354 19 140185000
354 20 090565000
354 21 080854000
354 22 080884000
354 23 080904000
354 24 081004000
355 01 080844000
355 02 080964000
355 03 070994000
355 04 081014000
355 05 081094000
355 06 081004000
355 07 080944000
355 08 070934000
355 09 081024000
355 10 080954000
355 11 070982000
355 12 070982000
355 13 070992000
355 14 070973000
355 15 070854000
355 16 070724000
355 17 070604000
355 18 070584000
355 19 070435000
355 20 070365000
355 21 070335000
355 22 070325000
355 23 070255000
355 24 060184000
356 01 040204000
356 02 030244000
356 03 020294000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/> Safety Related	X	<input type="checkbox"/> Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-239	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

356 04 010374000
356 05 010504000
356 06 010584000
356 07 160724000
356 08 010594000
356 09 010484000
356 10 020544000
356 11 020514000
356 12 030423000
356 13 030303000
356 14 020313000
356 15 030344000
356 16 030304000
356 17 020324000
356 18 030245000
356 19 020145000
356 20 160185000
356 21 140236000
356 22 150256000
356 23 150196000
356 24 020205000
357 01 020176000
357 02 160295000
357 03 010235000
357 04 010166000
357 05 160295000
357 06 150305000
357 07 150366000
357 08 020206000
357 09 150275000
357 10 150365000
357 11 150405000
357 12 150485000
357 13 150545000
357 14 150496000
357 15 150487000
357 16 150487000
357 17 150557000
357 18 150467000
357 19 150497000
357 20 150437000
357 21 150477000
357 22 150407000
357 23 150467000
357 24 150417000
358 01 150317000
358 02 150426000
358 03 150586000
358 04 160636000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-240	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

358 05 150617000
 358 06 150667000
 358 07 150607000
 358 08 150657000
 358 09 150767000
 358 10 150897000
 358 11 150987000
 358 12 150897000
 358 13 150897002
 358 14 150947004
 358 15 150907001
 358 16 160867006
 358 17 060435029
 358 18 050185002
 358 19 050325000
 358 20 070745000
 358 21 070855000
 358 22 070755000
 358 23 070605000
 358 24 070665000
 359 01 070605000
 359 02 070555000
 359 03 070525000
 359 04 070535000
 359 05 070554000
 359 06 070584000
 359 07 070604000
 359 08 070544000
 359 09 070514000
 359 10 080594000
 359 11 080594000
 359 12 080514000
 359 13 070493000
 359 14 070504000
 359 15 070514000
 359 16 080394000
 359 17 070344000
 359 18 070314000
 359 19 070304000
 359 20 070284000
 359 21 070275000
 359 22 070385000
 359 23 080405000
 359 24 080365000
 360 01 080365000
 360 02 090445000
 360 03 080395000
 360 04 080455000
 360 05 090445000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-241	of J-243

Client	PSEG Nuclear Development	Prepared by		Date	
Project	PSEG ESPA	Reviewed by		Date	
Proj. No	12380-001	Equip. No.		Approved by	

360 06 090475000
 360 07 090485000
 360 08 090514000
 360 09 090464000
 360 10 090443000
 360 11 080433000
 360 12 080423000
 360 13 080363000
 360 14 080343000
 360 15 080274000
 360 16 090294000
 360 17 090195000
 360 18 100245000
 360 19 120175000
 360 20 110165000
 360 21 100175000
 360 22 090275000
 360 23 100285000
 360 24 100255000
 361 01 100255000
 361 02 100265000
 361 03 100335000
 361 04 100345000
 361 05 100375000
 361 06 100355000
 361 07 100424000
 361 08 100444000
 361 09 100474000
 361 10 100514000
 361 11 100534000
 361 12 100514000
 361 13 100554000
 361 14 090484000
 361 15 090544000
 361 16 090524000
 361 17 090464000
 361 18 090494000
 361 19 080484000
 361 20 080564000
 361 21 080544000
 361 22 070504000
 361 23 070594000
 361 24 070604000
 362 01 080534000
 362 02 070634000
 362 03 070764000
 362 04 070764000
 362 05 070824000
 362 06 080874000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
<input type="checkbox"/>	Safety Related	<input checked="" type="checkbox"/> X
<input type="checkbox"/>		Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-242	of J-243

Client	PSEG Nuclear Development	Prepared by	Date
Project	PSEG ESPA	Reviewed by	Date
Proj. No	12380-001	Approved by	Date
	Equip. No.		

362 07 070854000
362 08 080934000
362 09 080814000
362 10 080854000
362 11 070792000
362 12 080802000
362 13 080802000
362 14 070682000
362 15 070693000
362 16 070734000
362 17 070674000
362 18 070575000
362 19 080465000
362 20 080465000
362 21 080515000
362 22 090495000
362 23 080495000
362 24 090415000
363 01 090435000
363 02 090375000
363 03 090275000
363 04 080225000
363 05 070255000
363 06 070195000
363 07 060125000
363 08 050214000
363 09 050264000
363 10 040164000
363 11 050203000
363 12 030174000
363 13 160203000
363 14 160273000
363 15 150422000
363 16 010454000
363 17 020454000
363 18 020434000
363 19 010554000
363 20 020554000
363 21 010544000
363 22 010504000
363 23 010484000
363 24 010454000
364 01 010454000
364 02 020364000
364 03 020434000
364 04 030374000
364 05 030324000
364 06 030314000
364 07 030274000



Calcs. For ENVIRONMENTAL CONSEQUENCE		
ANALYSIS FOR PSEG ESPA		
Safety Related	X	Non-Safety Related

Calc No.	2009-11222	
Rev.	2	Date
Page	J-243	of J-243

Client	PSEG Nuclear Development		Prepared by	Date
Project	PSEG ESPA		Reviewed by	Date
Proj. No	12380-001	Equip. No.	Approved by	Date

364 08 020305000
 364 09 020234000
 364 10 040364000
 364 11 040344000
 364 12 040304000
 364 13 040345000
 364 14 050334000
 364 15 040215000
 364 16 030195000
 364 17 040255000
 364 18 040165000
 364 19 020165000
 364 20 020135000
 364 21 150095000
 364 22 090186000
 364 23 090176000
 364 24 090276000
 365 01 080237000
 365 02 100166000
 365 03 010106000
 365 04 020086000
 365 05 030136000
 365 06 060146000
 365 07 100086000
 365 08 140097000
 365 09 030086000
 365 10 010095000
 365 11 150244000
 365 12 010235000
 365 13 010295000
 365 14 160345000
 365 15 160305000
 365 16 160255000
 365 17 150245000
 365 18 160345000
 365 19 150245000
 365 20 140215000
 365 21 130165000
 365 22 140245000
 365 23 140256000
 365 24 140266000
 8.0 7.0 6.0 7.0 10.0 17.0 17.0
 12.0