

February 27, 2008

L-2008-029 10 CFR 50.36 10 CFR 50.36a

U. S. Nuclear Regulatory Commission Attn: Document Control Desk Washington, DC 20555

Re:

St. Lucie Units 1 and 2

Docket Nos. 50-335 and 50-389

2007 Annual Radioactive Effluent Release Report

Enclosed is the 2007 Annual Radioactive Effluent Release Report for St. Lucie Units 1 and 2. This report is being sent pursuant to 10 CFR 50.36a(a)(2) and Technical Specification (TS) 6.9.1.7. The report is for the 12-month period beginning January 1, 2007 and ending December 31, 2007.

Attachment A is information for industry tritium initiative. Attachment B is a summary of the radiation monitors out of service greater than 30 days. Attachment C is a copy of C-200, Offsite Dose Calculation Manual (ODCM) Revision 30. Attachment D is a copy of the marked up pages from Revisions 28 and 29 of the ODCM.

Please contact us with any questions regarding this submittal.

Very truly yours,

Gordon L. Johnston Site Vice President

St. Lucie Plant

GLJ/tlt

Attachments

IE48 4001

FLORIDA POWER & LIGHT COMPANY ST. LUCIE PLANT UNITS NO. 1 & 2 LICENSE NUMBERS DPR-67 & NPF-16

COMBINED ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

FOR THE PERIOD

JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

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EFFLUENT AND WASTE DISPOSAL SUPPLEMENTAL INFORMATION

1. Regulatory Limits

1.1 For Liquid Waste Effluents

- A. The concentration of radioactive material released from the site shall be limited to ten times the concentrations specified in 10 CFR Part 20 Appendix B, Table 2, Column 2 for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the concentration shall be limited to 2E-4 micro-Curies/ml total activity.
- B. The dose or dose commitment to a MEMBER OF THE PUBLIC from radioactive material in liquid effluents released, from each reactor unit, to UNRESTRICTED AREAS shall be limited to:

 During any calendar quarter to <= 1.5 mrems to the Total Body and to <= 5 mrems to any organ, and

 During any calendar year to <= 3 mrems to the Total Body and to <= 10 mrems to any organ.

1.2 For Gaseous Waste Effluents:

- A. The dose rate in UNRESTRICTED AREAS due to radioactive materials released in gaseous effluents from the site shall be limited to:

 For Noble Gases: <= 500 mrems/yr to the total body and

 <= 3000 mrems/yr to the skin, and

 For lodine-131, lodine-133, Tritium, and all radionuclides in particulate form with half-lives greater than 8 days:

 <= 1500 mrems/yr to any organ.
- *B. The air dose due to noble gases released in gaseous effluents from each unit, to areas at and beyond the SITE BOUNDARY shall be limited to the following:

 During any calendar quarter, to <= 5 mrads for gamma radiation, and <= 10 mrads for beta radiation and, during any calendar year, to <= 10 mrads for gamma radiation and <= 20 mrads for beta radiation.
- *C. The dose to a MEMBER OF THE PUBLIC from lodine-131, lodine-133, Tritium, and all radionuclides in particulate form, with half-lives > 8 Days in gaseous effluents released, from each unit to areas at and beyond the site boundary, shall be limited to the following:

 During any calendar quarter to <= 7.5 mrem to any organ, and During any calendar year to <= 15 mrem to any organ.
- * The calculated doses contained in an annual report shall not apply to any ODCM Control. The reported values are based on actual release conditions instead of historical conditions that the ODCM Control dose calculations are based on. The ODCM Control dose limits are therefore included in Item 1 of the report, for information only.

2. Effluent Concentration Limits(ECL)

Water: Ten times the 10 CFR Part 20, Appendix B, Table 2, Column 2, except for entrained or dissolved noble gases as described in 1.1.A of this report.

Air: Release concentrations are limited to dose rate limits described in 1.2.A. of this report.

- 3. Average Energy of fission and activation gases in gaseous effluents is not applicable.
- 4. Measurements and approximations of total radioactivity

Where alpha, tritium, and listed nuclides are shown as zero Curies released, this should be interpreted as "no activity was detected on the samples using the ODCM Control analyses techniques to achieve required Lower Limit of Detection (LLD) sensitivity for radioactive effluents".

A summary of liquid effluent accounting methods is described in Table 3.1.

A summary of gaseous effluent accounting methods is described in Table 3.2.

4.1 Estimate of Errors

	LIQUID		GASE	EOUS
Error Topic	Avg %	Max %	Avg %	Max %
Release Point Mixing	2	5	· NA	NA
Sampling	1	5	2	5
Sample Preparation	1	5	1	5
Sample Analysis	3	10	3	10
Release Volume	2	5	4	15
Total Percent	9	30	10	35

The predictability of error for radioactive releases can only be applied to nuclides that are predominant in sample spectrums. Nuclides that are near background relative to the predominant nuclides in a given sample could easily have errors greater than the above listed maximums.

- 4. Measurements and Approximations of Total Radioactivity (Continued)
 - 4.2 Methods of Analyses

TABLE 3.1

RADIOACTIVE LIQUID EFFLUENT SAMPLING AND ANALYSIS

Liquid	Sampling	·	Method of
Source	Frequency	Type of Analysis	Analysis
·	Each Batch	Principal Gamma Emitters	p.h.a.
Monitor	Monthly	Tritium	L.S.
Tank	Composit	Gross Alpha	AIC
Releases	Quarterly	Sr-89, Sr-90, Fe-55,	
	Composite	Ni-63 & C-14	C.S.
Continuous Releases	Daily Grab Samples	Principal Gamma Emitters & I-131 for 4/M Composite Analysis	p.h.a.
		Dissolved & Entrained Gase One Batch/ Month	s p.h.a.
•	·	Tritium Composite Monthly	L.S.
		Alpha Composite Monthly	AIC
		Sr-89, Sr-90, Fe-55, Ni-63 & C-14 Composite Quarterly	c.s.

p.h.a.- Gamma Spectrum Pulse Height Analysis using Germanium Detectors. All peaks are identified and quantified.

L.S.- Liquid Scintillation Counting

C.S.- Chemical Separation

AIC Air Ion Chamber

4/M - Four per Month

- 4. Measurements and Approximations of Total Radioactivity (Continued)
 - 4.2 Methods of Analyses(Continued)

TABLE 3.2

RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS

Gaseous	Sampling		Method of
Source	Frequency	Type of Analysis	Analysis
Waste Gas Decay Tank Releases	Each Batch	Principal Gamma Emitters	p.h.a.
Containment Purge Releases	Each Purge	Principal Gamma Emitters Tritium	p.h.a L.S.
	4/M	Principal Gamma Emitters Tritium	p.h.a. ,L.S.
Plant Vent	Monthly Composite	Particulate Gross Alpha	AIC
	Quarterly Composite	Particulate Sr-89 & Sr-90, Fe-55, Ni-63 & C-14	C.S.

- p.h.a.- Gamma Spectrum Pulse Height Analysis using Germanium Detectors. All peaks are identified and quantified.
- L.S.- Liquid Scintillation Counting
- C.S.- Chemical Separation
- AIC.- Air Ion Chamber
- 4/M Four per Month

5. Batch Releases

A. Liquid	Unit 1	Unit 2	Eng. Unit
,			
1. Number of batch releases	41	40	
2. Total time period for batch releases	25,845	25,845	minutes
3. Maximum time period for a batch release	1,184	1,184	minutes
4. Average time period for a batch release	638	638	minutes
5. Minimum time period for a batch release	272	272	minutes
6. Average dilution stream flow during the			
period	853,677	853,677	gpm

All liquid releases are summarized in Tables

B. Gaseous	Unit 1	Unit 2	Eng. Unit
Number of batch releases	12	90	
2. Total time period for batch releases	2,443	28,365	minutes
3. Maximum time period for a batch release	600	9,093	minutes
4. Average time period for a batch release	204	315	minutes
5. Minimum time period for a batch release	81	44	minutes

All gaseous waste releases are summarized in Tables

6. Unplanned Releases

A. Liquid	Unit 1	Unit 2	Eng. Unit
Number of releases	0	0	
2. Total activity of releases	0.00E+00	0.00E+00	Curies

B. Gaseous	Unit 1	Unit 2	Eng. Unit
1. Number of releases	,0	0	
2. Total activity of releases	0.00E+00	0.00E+00	Curies

C. Unplanned Gas Releases - None

- 1. A description of the event and equipment involved.
- 2. Cause(s) for the unplanned release.
- 3. Actions taken to prevent a recurrence.
- 4. Consequences of the unplanned release.

7. Assessment of radiation dose from radioactive effluents to MEMBERS OF THE PUBLIC due to their activities inside the SITE BOUNDARY assumes the VISITOR onsite for 6 hours per day for 312 days per year at a distance of 1.6 kilometers in the South East Sector. The VISITOR received exposure from each of the two reactors on the Site. Actual Met Data was used to calculate Visitor Dose for Calendar Year 2007.

VISITOR DOSE RESULTS FOR CALENDAR YEAR 2007 were:

	DOSE	Gas Particulate	Dose
NOBLE GAS	<u>mrad</u>	& lodine Dose	<u>mrem</u>
Gamma Air Dose	6.29E-04	Bone	7.54E-06
Beta Air Dose	3.22E-04	Liver	1.52E-03
		Thyroid	3.71E-03
		Kidney	1.53E-03
		Lung	1.51E-03
		GI-LLI	1.51E-03
		Total Body	1.55E-03

8. Offsite Dose Calculation Manual(ODCM) Revision(s):

The ODCM was revised in March 2007 to implement the industry groundwater tritium initiative under the guidance of Nuclear Policy, NP-922.

Solid Waste and Irradiated Fuel Shipments:No irradiated fuel shipments were made from the site.

Common Solid waste from St. Lucie Units 1 and 2 were shipped jointly. A tabulated summation of these shipments is provided in this report as Table 3.9.

10. Process Control Program (PCP) Revisions:

There were no changes during the reporting interval.

11. Major Changes to Radioactive Liquid, Gaseous and Solid Waste Treatment Systems:

There were no changes during the reporting interval.

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 1 ANNUAL REPORT

JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

TABLE 3.3-1 LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

	UNIT	QTR#1	QTR#2
A. Fission and Activation Products			
1. Total Release - (Not including Tritium, Gases, and Alpha)	Ci	2.73E-03	6.43E-03
 Average Diluted Concentration During Period 	uCi/ml	1.08E-11	5.64E-11
B. Tritium			
1. Total Release	Ci	7.05E+01	1.28E+02
 Average Diluted Concentration During Period 	uCi/ml	2.80E-07	1.12E-06
C. Dissolved and Entrained Gases		•	
1. Total Release	Ci	2.80E-03	3.96E-03
Average Diluted Concentration During Period	uCi/ml	1.11 E- 11	3.47E-11
D. Gross Alpha Radioactivity			
1. Total Release	Ci	0.00E+00	0.00E+00
E. Volume of Waste Released (Prior to Dilution)	Liters	6.17E+05	1.07E+06
F. Volume of Dilution Water Used During Period	Liters	2.52E+11	1.14E+11

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 1 ANNUAL REPORT

JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

TABLE 3.3-1 LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES (Continued)

A. Fission and Activation Products	UNIT	QTR#3	QTR#4
1. Total Release - (Not including	C:	0.655.00	2.025.02
Tritium, Gases, and Alpha)	Ci	8.65E-03	2.93E-03
 Average Diluted Concentration During Period 	uCi/ml	3.42E-11	1.14E-11
B. Tritium			
1. Total Release	Ci	1.64E+02	4.80E+01
Average Diluted Concentration During Period	uCi/ml	6.48E-07	1.87E-07
C. Dissolved and Entrained Gases			
1. Total Release	Ci	5.85E-03	7.17E-03
Average Diluted Concentration During Period	uCi/ml	2.31E-11	2. 7 9E-11
D. Gross Alpha Radioactivity			
1 Total Release	Ci	0.00 E +00	0.00E+00
E. Volume of Waste Released (Prior to Dilution)	Liters	9.53E+05	9.04E+05
F. Volume of Dilution Water Used During Period	Liters	2.53E+11	2.57E+11

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 2

ANNUAL REPORT

JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

TABLE 3.3-2 LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

	UNIT	QTR#1	QTR#2
A. Fission and Activation Products			
1. Total Release - (Not including			
Tritium, Gases, and Alpha)	Ci	2.73E-03	6.43E-03
2. Average Diluted Concentration			
During Period	uCi/ml	1.08E-11	5.64E-11
B. Tritium			
1. Total Release	Ci	7.05E+01	1.28E+02
2. Average Diluted Concentration			
During Period	uCi/ml	2.80E-07	1.12E-06
C. Dissolved and Entrained Gases			
1. Total Release	Ci	2.80E-03	3.96E-03
2. Average Diluted Concentration			
During Period	uCi/ml	1.11E-11	3.47E-11
D. Gross Alpha Radioactivity	÷		
1. Total Release	Ci	0.00E+00	0.00E+00
E. Volume of Waste Released			
(Prior to Dilution)	Liters	6.17E+05	1.07E+06
F. Volume of Dilution Water	•		
Used During Period	Liters	2.52E+11	1.14E+11

ST. LUCIE UNIT # 2 ANNUAL REPORT

JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

TABLE 3.3-2 LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES (Continued)

	UNIT	QTR#3	QTR#4
A. Fission and Activation Products			
1. Total Release - (Not including Tritium, Gases, and Alpha)	Ci	8.65E-03	2.48E-03
 Average Diluted Concentration During Period 	uCi/ml	3.42E-11	9.65 <u>E</u> -12
B. Tritium			
1. Total Release	Ci	1.64E+02	4.80E+01
 Average Diluted Concentration During Period 	uCi/ml	6.48E-07	1.87E-07
C. Dissolved and Entrained Gases			
1. Total Release	Ci	5.85E-03	7.17E-03
2. Average Diluted Concentration During Period	uCi/ml	2.31E-11	2.79E-11
D. Gross Alpha Radioactivity			
1. Total Release	Ci	0.00E+00	0.00E+00
E. Volume of Waste Released			
(Prior to Dilution)	Liters	9.53E+05	9.04E+05
F. Volume of Dilution Water			
Used During Period	Liters	2.53E+11	2.57E+11

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 1 ANNUAL REPORT JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

TABLE 3.4-1 LIQUID EFFLUENTS

NUCLIDES	Continuou		s Mode Batch		Mode	
RELEASED	UNIT	QTR#1	QTR#2	QTR#1	QTR#2	
Na-24	Ci	0.00E 00	· 0.00E 00	0.00E+00	2.21E-06	
Cr-51	Ci	0.00E 00	0.00E 00	0.00E+00	4.99E-04	
Mn-54	Ci	0.00E 00	0.00E 00	1.25E-04	1.11E-04	
Fe-55	Ci	0.00E 00	0.00E 00	1.20E-03	1.65E-03	
Mn-56	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Co-57	Ci	0.00E 00	0.00E 00	0.00E+00	2.24E-06	
Co-58	Ci	0.00E 00	0.00E 00	1.86E-04	2.11E-03	
Fe-59	Ci	0.00E 00	0.00E 00	0.00E+00	1.65E-04	
Co-60	Ci	0.00E 00	0.00E 00	1.03E-03	1.07E-03	
Zn-65	Ci	0.00E 00	0.00E 00	0.00E+00	2.16E-06	
Ni-65	Ci	0.00E 00	0.00E 00	0.00 E +00	0.00E+00	
Br-82	Ci	0.00E 00	0.00E 00	0.00 E +00	0.00E+00	
Rb-88	Ci	0.00E 00	0.00E 00	0.00 E +00	2.25E-05	
Sr-89	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Sr-90	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Y-90	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E + 00	
Sr-91	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Sr-92	Ci ,	0.00E 00	0.00E 00	0.00 E +00	0.00E+00	
Y-92	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Zr-95	Ci	0.00E 00	0.00E 00	4.46E-06	1.10E-04	
Nb-95	Ci	0.00E 00	0.00E 00	4.79E-05	1.95E-04	
Zr-97	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Nb-97	Ci	0.00E 00	0.00E 00	1.43E-05	1.20E-04	
Tc-99m	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Mo-99	Ci	0.00E 00	0.00E 00	0.00 E +00	0.00E+00	
Ru-103	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Ag-110m	Ci	0.00E 00	0.00E 00	2.89E-06	0.00E+00	
Sn-113	Ci	0.00E 00	0.00E 00	0.00E+00	9.39 E- 06	
Sb-122	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Sb-124	Ci	0.00E 00	0.00E 00	0.00E+00	1.48E-05	
Sb-125	Ci	0.00E 00	0.00E 00	1.02E-04	2.35E-04	

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 1

ANNUAL REPORT

JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

TABLE 3.4-1 LIQUID EFFLUENTS (Continued)

NUCLIDES	Continuous		ıs Mode	Mode Batch M	
RELEASED	UNIT	QTR#1	QTR#2	QTR#1	QTR#2
Te-129	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
Te-129m	Ci	0.00E 00	0.00E 00	0.00E+00	0.00 E +00
I-130	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-131	Ci	0.00E 00	0.00 E 00	0.00E+00	1.12E-05
Te-132	Ci	0.00E 00	0.00E 00	0.00 E +00	3.59E-05
I-132	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
I-133	Ci	0.00E 00	0.00E 00	0.00E+00	4.84E-06
I-134	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
Cs-134	Ci	0.00E 00	0.00E 00	1.30E-06	0.00E+00
I-135	Ci	0.00E 00	0.00E00	0.00E+00	0.00E+00
Cs-136	Ci	0.00E 00	0.00E 00	0.00E+00	1.18E-06
Cs-137	Ci	0.00E 00	0.00E 00	2,29E-05	5.93E-05
Cs-138	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
Ba-140	Ci	0.00E 00	0.00E 00	0.00E+00	3.22E-06
La-140	Ci	0.00E 00	0.00E 00	0.00E+00	3.22E-06
Ce-141	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
Ce-144	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
Pr-144	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
W-187	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
Np-239	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
TOTAL FOR					
PERIOD	Ci	0.00E+00	0.00E+00	2.73E-03	6.43E-03
Ar-41	Ci	0.00E 00	0.00E 00	0.00E+00	9.50E-06
Kr-85m	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
Kr-85	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
Kr-87	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
Kr-88	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
Xe-131m	Ci	0.00E 00	0.00E 00	8.50E-05	0.00 E +00
Xe-133m	Ci	0.00E 00	0.00E 00	1.81E-05	4.42E-05
Xe-133	Ċi	0.00E 00	0.00E 00	2.70E-03	3.90E-03
Xe-135m	Ci	0.00E 00	0.00 E 00	0.00E+00	0.00E+00
Xe-135	Ci	0.00E 00	0.00E 00	0.00E+00	5.61E-06

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 1

ANNUAL REPORT

JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

TABLE 3.4-1 LIQUID EFFLUENTS (Continued)

NUCLIDES	Continuous		s Mode	Batch Mo	ode
RELEASED	UNIT	QTR#3	QTR#4	QTR#3	QTR#4
Na-24	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
Cr-51	Ci	0.00E 00	0.00E 00	2.63E-04	8.23E-05
Mn-54	Ci	0.00E 00	0.00E 00	1.21E-04	4.13E-05
Fe-55	Ci	0.00E 00	0.00E 00	3.03E-03	4.52E-04
Mn-56	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
Co-57	Ci	0.00E 00	0.00E 00	2.12E-06	0.00E 00
Co-58	Ci	0.00E 00	0.00E 00	3.75E-03	1.63E-03
Fe-59	Ci	0.00E 00	0.00E 00	1.08E-04	2.55E-05
Co-60	Ci	0.00E 00	0.00E 00	8.50E-04	3.55E-04
Zn-65	Ci	0.00E 00	0.00E 00	0.00E 00	2.26E-06
Ni-65	Ci	0.00E 00	0.00E 00	$0.00E_{00}$	0.00E 00
Br-82	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
Rb-88	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
Sr-89	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
Sr-90	Ci	0.00E 00	0.00E 00	. 0.00E 00	0.00E 00
Y-90	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
Sr-91	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
Sr-92	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
Y-92	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
Zr-95	Ci	0.00E 00	0.00E 00	1.14E-04	3.42E-05
Nb-95	Ci	0.00E 00	0.00E 00	1.73E-04	5.89E-05
Zr-97	Ci	0.00E 00	0.00E 00°	2.46E-05	6.10E-05
Nb-97	Ci	≥0.00E 00	0.00E 00	5.73E-05	6.13E-05
Tc-99m	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
Mo-99	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
Ru-103	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
Ag-110m	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
Sn-113	Ci	0.00E 00	0.00E 00	1.37E-05	0.00E 00
Sb-122	Ci	0.00 E 00	0.00E 00	0.00E 00	0.00E 00
Sb-124	Ci	0.00E 00	0.00E 00	0.00E 00	2.65E-06
Sb-125	Ci	0.00E 00	0.00E 00	1.29E-04	8.61E-05

ST. LUCIE UNIT # 1

ANNUAL REPORT

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TABLE 3.4-1 LIQUID EFFLUENTS (Continued)

NUCLIDES	Continuou		s Mode	Batch Mo	Batch Mode	
RELEASED	UNIT	QTR#3	QTR#4	QTR#3	QTR#4	
Te-129	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Te-129m	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
I-130	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
I-131	Ci	0.00E 00	0.00E 00	0.00E 00	3.86E-06	
Te-132	Ci	0.00E 00	0.00 E 00	0.00E 00	1.63E-05	
I-132	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
I-133	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
I-134	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Cs-134	Ci	0.00E 00	0.00E 00	3.67E-06	8.40E-07	
I-135	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Cs-136	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Cs-137	Ci	0.00E 00	0.00E 00	2.19E-05	2.07E-05	
Cs-138	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Ba-140	Ci	0.00E 00	0.00 E 00	0.00 E 00	0.00E 00	
La-140	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Ce-141	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Ce-144	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Pr-144	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
W-187	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Np-239	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
TOTAL FOR				•		
PERIOD	Ci	0.00E+00	0.00E+00	8.65E-03	2.93E-03	
Ar-41	Ci	0.00E 00	0.00E 00	6.42E-06	1.49E-06	
Kr-85m	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Kr-85	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Kr-87	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Kr-88	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Xe-131m	Ci	0.00E 00	0.00E 00	1.48E-04	0.00E 00	
Xe-133m	Ci	0.00E 00	0.00E 00	0.00E 00	3.04E-05	
Xe-133	Ci	0.00E 00	0.00E 00	5.69E-03	7.13E-03	
Xe-135m	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Xe-135	Ci	0.00E 00	0.00E 00	5.37E-06	0.00E 00	
Xe-138	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 2 ANNUAL REPORT JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

TABLE 3.4-2 LIQUID EFFLUENTS

NUCLIDES	Continuous		s Mode Batch M		lode	
RELEASED	UNIT	QTR#1	QTR#2	QTR#1	QTR#2	
Na-24	Ci	0.00E 00	0.00E 00	0.00E+00	· 2.21E-06	
Cr-51	Ci .	0.00E 00	0.00E 00	0.00E+00	4.99E-04	
Mn-54	Ci	0.00E 00	0.00E 00	1.25E-04	1.11 E- 04	
Fe-55	Ci	0.00E 00	0.00E 00	1.20E-03	1.65E-03	
Mn-56	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Co-57	Ci	0.00E 00	0.00E 00	0.00E+00	2.24E-06	
Co-58	Ci	0.00E 00	0.00E 00	1.86E-04	2.11E-03	
Fe-59	Ci	0.00E 00	0.00E 00	0.00E+00	1.65E-04	
Co-60	Ci	0.00E 00	0.00E 00	1.03E - 03	1.07E-03	
Zn-65	Ci	0.00E 00	0.00E 00	0.00E+00	2.16E-06	
Ni-65	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Br-82	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Rb-88	Ci	0.00E 00	0.00E 00	0.00E+00	2.25E-05	
Sr-89	Ci	0.00 E 00	0.00E 00	0.00 E +00	0.00E+00	
Sr-90	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Y-90	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Sr-91	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Sr-92	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Y-92	Ci	0.00E 00	0.00E 00	0.00 E +00	0.00E+00	
Zr-95	Ci	0.00E 00	0.00E 00	4.46E-06	1.10E-04	
Nb-95	Ci	0.00E 00	0.00E 00	4.79E-05	1.95E-04	
Zr-97	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Nb-97	Ci	0.00E 00	0.00E 00	1.43E-05	1.20E-04	
Tc-99m	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Mo-99	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Ru-103	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Ag-110m	Ci	0.00E 00	0.00E 00	2.89E-06	0.00E+00	
Sn-113	Ci	0.00E 00	0.00E 00	0.00E+00	9.39E-06	
Sb-122	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00	
Sb-124	Ci	0.00E 00	0.00E 00	0.00E+00	1.48E-05	
Sb-125	Ci	0.00E 00	0.00E 00	1.02E-04	2.35E-04	

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TABLE 3.4-2 LIQUID EFFLUENTS (Continued)

NUCLIDES		Continuou	ıs Mode	Batch Mode	
RELEASED	UNIT	QTR#1	QTR#2	QTR#1	QTR#2
T 100	~ :				
Te-129	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
Te-129m	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
I-130	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
I-131	Ci	0.00E 00	0.00E 00	0.00E+00	1.12E-05
Te-132	Ci	0.00E 00	0.00E 00	0.00E+00	3.59E-05
I-132	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
I-133	Ci	0.00E 00	0.00E 00	0.00E+00	4.84E-06
I-134	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
Cs-134	Ci	0.00E 00	0.00E 00	1.30 E- 06	0.00 E +00
I-135	Ci	0.00E 00	0.00E 00	0.00E+00	0.00 E +00
Cs-136	Ci	0.00E 00	0.00E 00	0.00E+00	1.18E-06
Cs-137	Ci	0.00E 00	0.00E 00	2.29E-05	5.93E-05
Cs-138	Ci	0.00E 00	0.00E 00	0.00E+00	0.00 E +00
Ba-140	Ci	0.00E 00	0.00 E 00	0.00E+00	3.22E-06
La-140	Ci	0.00E 00	0.00E 00	0.00E+00	3.22E-06
Ce-141	Ci	0.00E 00	0.00 E 00	0.00E+00	0.00E+00
Ce-144	Ci	0.00E 00	0.00 E 00	0.00 E +00	0.00E+00
Pr-144	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
W-187	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
Np-239	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
TOTAL FOR					
PERIOD	Ci	0.00E+00	0.00E+00	2.73E-03	6.43E-03
Ar-41	Ci	0.00E 00	0.00E 00	0.00E+00	9.50E-06
Kr-85m	Ci	0.00E 00	0.00E 00 0.00E 00	0.00E+00	9.50E+00
Kr-85	Ci	0.00E 00	0.00E 00 0.00E 00	0.00E+00	0.00E+00
Kr-87	Ci		0.00E 00 0.00E 00		0.00E+00
Kr-88	Ci Ci	0.00E 00	0.00E 00 0.00E 00	0.00E+00	•
		0.00E 00		0.00E+00	0.00E+00
Xe-131m	Ci C:	0.00E 00	0.00E 00	8.50E-05	0.00E+00
Xe-133m	Ci C:	0.00E 00	0.00E 00	1.81E-05	4.42E-05
Xe-133	Ci	0.00E 00	0.00E 00	2.70E-03	3.90E-03
Xe-135m	Ci	0.00E 00	0.00E 00	0.00E+00	0.00E+00
Xe-135	Ci	0.00E 00	0.00E 00	0.00E+00	5.61E-06

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 2 ANNUAL REPORT

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TABLE 3.4-2 LIQUID EFFLUENTS (Continued)

NUCLIDES	Continuou		s Mode Batch N		1ode	
RELEASED	UNIT	QTR#3	QTR#4	QTR#3	QTR#4	
			•			
Na-24	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Cr-51	Ci	0.00E 00	0.00E 00	2.63E-04	8.23E-05	
Mn-54	Ci	0.00E 00	0.00E 00	1.21E-04	4.13E-05	
Fe-55	Ci	0.00E 00	0.00E 00	3.03E-03	4.52E-04	
Mn-56	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Co-57	Ci	0.00E 00	0.00E 00	2.12E-06	0.00E 00	
Co-58	Ci	0.00E 00	0.00E 00	3.75E-03	1.63E-03	
Fe-59	Ci	0.00E 00	0.00E 00	1.08E-04	2.55E-05	
Co-60	Ci	0.00E 00	0.00E 00	8.50E-04	3.55E-04	
Zn-65	Ci	0.00E 00	0.00E 00	0.00E 00	2.26E-06	
Ni-65	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Br-82	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Rb-88	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Sr-89	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Sr-90	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Y-90	Ci	0.00E 00	0.00E 00	0.00E 00.	0.00E 00	
Sr-91	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Sr-92	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Y-92	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Zr-95	Ci	0.00E 00	0.00E 00	1.14E-04	3.42E-05	
Nb-95	Ci	0.00E 00	0.00E 00	1.73E-04	5.89E-05	
Zr-97	Ci	0.00E 00	0.00E 00	2.46E-05	6.10E-05	
Nb-97	Ci ·	0.00E 00	0.00E 00	5.73E-05	6.13E-05	
Tc-99m	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Mo-99	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Ru-103	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Ag-110m	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Sn-113	Ci	0.00E 00	0.00E 00	1.37 E- 05	0.00E 00	
Sb-122	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Sb-124	Ci	0.00E 00	0.00E 00	0.00E 00	2.65E-06	
Sb-125	Ci	0.00E 00	0.00E 00	1.29E-04	8.61E-05	

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 2

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TABLE 3.4-2 LIQUID EFFLUENTS (Continued)

NUCLIDES		Continuous		Batch Mo	Batch Mode	
RELEASED	UNIT	QTR#3	QTR#4	QTR#3	QTR#4	
Te-129	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Te-129m	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
I-130	Ci	0.00E 00	0.00E 00	0.00 E 00	0.00E 00	
I-131	Ci	0.00E 00	0.00E 00	0.00E 00	3.86E-06	
Te-132	Ci	0.00E 00	0.00E 00	0.00E 00	1.63E-05	
I-132	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
I-133	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
I-134	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Cs-134	Ci	0.00E 00	0.00E 00	3.67E-06	8.40E-07	
I-135	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Cs-136	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Cs-137	Ci	0.00E 00	0.00E 00	2.19E-05	2.07E-05	
Cs-138	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Ba-140	Ci	0.00E 00	0.00 E 00	0.00E 00	0.00E 00	
La-140	Ci	0.00E 00	0.00E 00	0.00 E 00	0.00E 00	
Ce-141	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Ce-144	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Pr-144	Ci ·	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
W-187	Ci	0.00E 00	0.00E 00	0.00E 00	$0.00 \to 00$	
Np-239	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
TOTAL FOR						
PERIOD	Ci	0.00 E +00	0.00E+00	8.65E-03	2.48E-03	
Ar-41	Ci	0.00E 00	0.00E 00	6.42E-06	1.49E - 06	
Kr-85m	Ci	0.00E 00	0.00E 00	0.00 E 00	0.00E 00	
Kr-85	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Kr-87	Ci	0.00E 00	0.00E 00	· 0.00E 00	0.00E 00	
Kr-88	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Xe-131m	Ci	0.00E 00	0.00E 00	1.48E-04	0.00E 00	
Xe-133m	Ci	0.00E 00	0.00E 00	0.00E 00°	3.04E-05	
Xe-133	Ci	0.00E 00	0.00E 00	5.69E-03	7.13E-03	
Xe-135m	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	
Xe-135	Ci [*]	0.00 E 00	0.00E 00	5.37E-06	0.00E 00	
Xe-138	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00	

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 1 ANNUAL REPORT JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

TABLE 3.5-1 LIQUID EFFLUENTS - DOSE SUMMATION

AGE GROUP: ADULT

LOCATION: ANY ADULT

FISH AND SHELLFISH

ORGAN	DOSE mrem
Bone	4.49E-03
Liver	1.73E-02
Thyroid	5.63E-04
Kidney	5.71E-04
Lung	1.96 E -02
GI-LLI	1.28E-02
Total Body	5.08E-03

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 2 ANNUAL REPORT JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

TABLE 3.5-2 LIQUID EFFLUENTS - DOSE SUMMATION

AGE GROUP: ADULT

LOCATION: ANY ADULT

FISH AND SHELLFISH

	DOSE
ORGAN	mrem
Bone	4.49E-03
Liver	1.73E-02
Thyroid	5.63E-04
Kidney	5.71E-04
Lung	1.96E-02
GI-LLI	1.28E-02
Total Body	5.08E-03

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 1

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TABLE 3.6-1 GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

	•	UNIT	QTR#1	QTR#2
A.	Fission and Activation Gases			
	1. Total Release	Ci	2.20E+00	1.69E-02
	Average Release Rate For Period	uCi/sec	2.79E-01	2.14E-03
B.	Iodines			
	1. Total Iodine-131	Ci	0.00E 00	8.96E-06
	Average Release Rate For Period	uCi/sec	0.00E+00	1.14E-06
C.	Particulates			
	1. Particulates (Half Life > 8 days)	Ci	0.00E+00	3.54E-06
	Average Release Rate For Period	uCi/sec	0.00E+00	4.50E-07
	3. Gross Alpha Radioactivity	Ci	1.39E-07	1.04E-07
D.	Tritium			
	1. Total Release	Ci	5.42E+00	5.59E+01
	Average Release Rate For Period	uCi/sec	6.89E-01	7.11E+00

ST. LUCIE UNIT # 1

ANNUAL REPORT

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TABLE 3.6-1 GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES (Continued)

A.	Fission an	nd Activation Gases	UNIT	QTR#3	QTR#4
	1.	Total Release	Ci	3.78E+00	0.00E+00
	2.	Average Release Rate For Period	uCi/sec	4.81E-01	0.00E+00
В.	Iodines				
	1.	Total Iodine-131	Ci	0.00E 00	0.00E 00
	2.	Average Release Rate For Period	uCi/sec	0.00E+00	0.00E+00
C.	Particular	tes			
	1.	Particulates (Half Life > 8 days)	Ci	7.74E-06	2.24E-06
	2.	Average Release Rate For Period	uCi/sec	9.84E-07	2.85E-07
	3.	Gross Alpha Radioactivity	Ci	2.09E-08	1.06E-04
D.	Tritium				
	1.	Total Release	Ci	2.66E+00	0.00E+00
	2.	Average Release Rate For Period	uCi/sec	3.38E-01	0.00E+00

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 2

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TABLE 3.6-2 GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

		UNIT	QTR#1	QTR#2
A _. .	Fission and Activation Gases			
	1. Total Release	Ci	1.35E+00	4.58E-01
	2. Average Release Rate For Period	uCi/sec	1.72E-01	5.83E-02
B.	Iodines			·
	1. Total Iodine-131	Ci	3.94E-05	6.74E-05
	Average Release Rate For Period	uCi/sec	0.00E+00	8.57E-06
C.	Particulates			
•	1. Particulates (Half Life > 8 days)	Ci	1.79E-06	2.87E-06
	 Average Release Rate For Period 	uCi/sec	2.28E-07	3.64E-07
	3. Gross Alpha Radioactivity	Ci	5.42E-08	8.86E-08
D.	Tritium			
	1. Total Release	Ci	7.52E+00	6.26E+01
	Average Release Rate For Period	uCi/sec	9.57 E -01	7.96E+00

ST. LUCIE UNIT # 2

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TABLE 3.6-2 GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES (Continued)

A. Fissio	on and Activation Gases	UNIT	QTR#3	QTR#4
	1. Total Release	Ci	7.72E+00	9. 75 E-02
	2. Average Release Rate For Period	uCi/sec	9.82E-01	1.24E-02
B. Iodin	nes			
. •	1. Total Iodine-131	Ci	1.08E-04	2.36E-04
	Average Release Rate For Period	uCi/sec	0.00E+00	0.00E+00
C. Parti	culates		÷	
	 Particulates (Half Life > 8 days) 	Ci	5.59E-06	3.76E-06
	2. Average Release Rate For Period	uCi/sec	7.11E-07	4.78E-07
	3. Gross Alpha Radioactivity	Ci	3.26E-08	0.00E+00
D. Tritiu	um .			
	1. Total Release	Ci	3.94E+00	2.75E-02
	Average Release Rate For Period	uCi/sec	5.01E-01	3.49E-03

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 1 ANNUAL REPORT JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

TABLE 3.7-1 GASEOUS EFFLUENTS - GROUND LEVEL RELEASES

	•					
Nuclid	es	Continuous Mode			Batch 1	Mode
Release	ed Unit	QTR#1	QTR#2	Q.	ΓR#1	QTR#2
1. Fission Gases			• •		. '	
Ar-41	Ci	2.00E+00	0.00E 00	. 1	04E-01	4.72E-03
Kr-85n		0.00E+00	0.00E 00		.00E 00	0.00E 00
Kr-85	Ci	0.00E+00	0.00E 00		.00E 00	0.00E 00
Kr-87	Ci	0.00E+00	0.00E 00		.00E 00	0.00E 00
Kr-88	Ci	0.00E+00	0.00E 00		.00E 00	0.00E 00
Kr-89	Ci	0.00E+00	0.00E 00		.00E 00	0.00E 00
Kr-90	Ci	0.00E+00	0.00E 00		.00E 00	0.00E 00
Xe-127	•	0.00E+00	0.00E 00		.00E 00	0.00E-00
Xe-131		0.00E+00	0.00E 00	0.	.00E 00	0.00E 00
Xe-133	8m Ci	0.00E+00	0.00E 00	· 0.	.00E 00	0.00E 00
Xe-133	Ci	0.00E+00	0.00E 00	9.	31E-02	7.67E-03
Xe-135	im Ci	0.00E+00	0:00E 00	• 0.	.00E 00	0.00E 00
Xe-135	.Ci	0.00E+00	0.00E 00	4.	91E-05	4.47E-03
Xe-137	Ci Ci	0.00E+00	0.00E 00	0.	.00E 00	0.00E 00
Xe-138	Ci Ci	0.00E+00	0.00E 00	0.	.00E 00	0.00E 00
Total for Period	Ci	2.00E+00	0.00E+00	1.	9 7E- 01	1.69E-02
2. Iodines	•					
I-131	Ci	0.00E 00	8.96E-06		•	
I-132	Ci	0.00E 00	0.00E 00		•	
I-133	Ci	0.00E+00	0.00E 00			
I-134	Ci	0.00E 00	0.00E 00			•
I-135	Ci	0.00E 00	0.00E 00			
Total for Period	Ci	0.00E+00	8.96E-06			
•	,					
3. Particulates (>					· .	
Cr-51	Ci	0.00E 00	0.00E 00		*	
Mn-54	Ci	0.00E 00	0.00E 00			
Fe-55	Ci	0.00E 00	0.00E 00			
Co-57	Ci	0.00E 00	0.00 E 00			15.
Co-58	Ci	0.00E 00	0.00E 00			
Fe-59	Ci	0.00E 00	0.00E 00			
Co-60	Ci C:	0.00E 00	2.51E-06			
Zn-65	Ci	0.00E 00	0.00E 00		•	
Zr-95	Ci	0.00E 00	0.00E 00			•

0.00E 00

0.00E 00

Ci

Nb-95

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TABLE 3.7-1 GASEOUS EFFLUENTS - GROUND LEVEL RELEASES (Continued)

			Continuou	s Mode
	Nuclides	Unit	QTR#1	QTR#2
	Released			
3. Particula	tes (> 8 Days)	(continued)	
	Sr-89	Ci	0.00E 00	0.00E 00
	Sr-90	Ci	0.00E 00	0.00E 00
	Y-90	Ci ·	0.00E 00	0.00E 00
	Ru-103	Ci	0.00E 00	0.00E 00
	Ag-110m	Ci	0.00E 00	0.00E 00
	Sn-113	Ci	0.00E 00	0.00E 00
	Sb-124	Ci	0.00E 00	0.00E 00
	Sb-125	Ci	0.00E 00	0.00E 00
	Te-129m	Ci	0.00E 00	0.00E 00
	Cs-134	Ci	0.00E 00	0.00E 00
	Cs-136	Ci	0.00E 00	0.00E 00
	Cs-137	Ci	0.00E 00	1.03E-06
,	Ba-140	Ci	0.00E 00	0.00E 00
	Ce-141	Ci	0.00E 00	0.00E 00
	Ce-144	Ci	0.00E 00	0.00E 00
Total for Per	riod	Ci	0.00E+00	3.54E-06
4. Particula	tes (<8 Days)			
	Mn-56	Ci	0.00E 00	0.00E 00
	Ni-65	Ci	0:00E 00	0.00E 00
	Br-82	Ci	0.00E 00	0.00E 00
	Rb-88	Ci	0.00E 00	0.00E 00
	Rb-89	Ci	0.00E 00	0.00E 00
	Sr-91	Ci	0.00E 00	0.00E 00
	Sr-92	Ci	0.00E 00	0.00E 00
	Y-92	Ci	0.00E 00	0.00E 00
	Zr-97	Ci	0.00E 00	0.00E 00
	Nb-97	Ci	0.00E 00	0.00E 00
	Tc-99m	Ci	0.00E 00	0.00E 00
	Mo-99	Ci	0.00E 00	0.00E 00
	Sb-122	Ci	0.00E 00	0.00E 00
	Te-129	Ci	0.00E 00	0.00E 00
	Te-132	Ci	0.00E 00	0.00E 00
	Cs-138	Ci	0.00E 00	0.00E 00
	La-140	Ci	0.00E 00	0.00E 00
	Pr-144	Ci	0.00E 00	0.00E 00
	W-187	Ci	0.00E 00	0.00E 00
	Np-239	Ci	0.00E 00	0.00E 00
Total for Per	riod	Ci	0.00E+00	0.00E+00

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 1 ANNUAL REPORT JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

TABLE 3.7-1 GASEOUS EFFLUENTS - GROUND LEVEL RELEASES (Continued)

	Nuclides		Continuo	us Mode	Batch 1	Mode
	Released	Unit	QTR#3	QTR#4	QTR#3	QTR#4
1. Fission		~.	0.5077.01	0.00=.00		
	Ar-41	Ci	8.53E-01	0.00E 00	0.00E 00	0.00E 00
	Kr-85m	Ci	0.00E 00	0.00 E 00	0.00E 00	0.00E 00
•	Kr-85	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
	Kr-87	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
	Kr-88	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
	Kr-89	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
,	Kr-90	Ci ·	0.00 E 00	0.00E 00	0.00E 00	0.00E 00
	Xe-127	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
	Xe-131m	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
	Xe-133m	Ci	0.00E 00	0.00E 00	2.04E-03	0.00E 00
	Xe-133	Ci	1.80E+00	0.00E 00	2.02E-01	0.00E 00
•	Xe-135m	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
	Xe-135	Ci	9.25E-01	0.00E 00	2.38E-03	0.00E 00
	Xe-137	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
	Xe-138	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00
Total for P		Ci	3.58E+00	0.00E+00	2.06E-01	0.00E+00
2. Iodines		•				
2. Touries	I-131	Ci	0.00E 00	0.00E 00	v	
	I-132	Ci	0.00E 00	0.00E 00		
	I-133	Ci	0.00E 00	0.00E 00		
	I-134	Ci	0.00E 00	0.00E 00		
	I-134 I-135	Ci	0.00E 00	0.00E 00		
Total for Po		Ci	0.00E+00	0.00E+00		
1014110111	orro u	CI	0.00 L 100	0.00E+00		
3. Particul	ates (>8 Da	ys)				
	Cr-51	Ci	0.00E 00	0.00E 00		
	Mn-54	Ci	0.00E 00	0.00E 00		
	Fe-55	Ci C:	0.00E 00	0.00E 00		•
	Co-57 Co-58	Ci Ci	0.00E 00 0.00E 00	0.00E 00		
	Fe-59	Ci Ci	0.00E 00 0.00E 00	0.00E 00 0.00E 00		
	Co-60	Ci	6.74E-06	0.00E 00 0.00E 00		
	Zn-65	Ci	0.00E 00	0.00E 00	•	
	Zr-95	Ci	0.00E 00	0.00E 00		
	Nb-95	Ci	0.00E 00	0.00E 00		
	Sr-89	Ci	0.00E 00	0.00E 00		
	Sr-90	Ci	0.00E 00	0.00E 00		

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TABLE 3.7-1 GASEOUS EFFLUENTS - GROUND LEVEL RELEASES (Continued)

•	11322 3.7 1 011	·	a :	OROUND
	Muslidas	T T : 4	Continuous	
	Nuclides Released	Unit	QTR#3	QTR#4
3. Particula	ites (> 8 Days) (continued)	,	
	Y-90	Ci	0.00E 00	0.00E 00
	Ru-103	Ci	0.00E 00	0.00E 00
	Ag-110m	Ci	0.00E 00	0.00E 00
	Sn-113		0.00E 00	0.00E 00
	Sb-124	Ci	0.00E 00	0.00E 00
•	Sb-125	Ci	0.00E 00	0.00E 00
	Te-129m	Ci	0.00E 00	0.00E 00
	Cs-134	Ci	0.00E 00	0.00E 00
	Cs-136	Ci	0.00E 00	0.00E 00
	Cs-137	Ci	1.00E-06	2.24E-06
	Ba-140	Ci	0.00E 00	0.00E 00
	Ce-141	Ci	0.00E 00	0.00E 00
	Ce-144	Ci	0.00E 00	0.00E 00
Total for Pe		Ci	7.74E-06	2.24E-06
4. Particula	tes (<8 Days)			
	Mn-56	Ci	0.00E 00	0.00E.00
				0.00E 00
	Ni-65	Ci	0.00E 00	0.00E 00
	Br-82	Ci	0.00E 00	0.00E 00
	Rb-88	Ci	0.00E 00	0.00E 00
	Rb-89	Ci	0.00E 00	0.00E 00
	Sr-91	Ci	0.00E 00	0.00E 00
	Sr-92	Ci	0.00E 00	0.00E 00
	Y-92	Ci	0.00E 00	0.00E 00
,	Zr-97	Ci	0.00E 00	0.00E 00
	Nb-97	Ci	0.00E 00	0.00E 00
	Tc-99m	Ci	0.00E 00	0.00E 00
	Mo-99	Ci	0.00E 00	0.00E 00
	Sb-122	Ci	0.00E 00	0.00E 00
	Te-129	Ci	0.00E 00	0.00E 00
	Te-132	Ci	0.00 E 00	0.00E 00
	Cs-138	Ci	0.00E 00	0.00E 00
	La-140	Ci	0.00E 00	0.00E 00
	Pr-144	Ci	0.00E 00	0.00E 00
	W-187	Ci	0.00E 00	0.00E 00
	Np-239	Ci	0.00E 00	0.00E 00
Total for Per	rıod	Ci	0.00E+00	0.00E+00

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TABLE 3.7-2 GASEOUS EFFLUENTS - GROUND LEVEL RELEASES

	Nuclides		Continuous Mode		Batch Mode		
	Released	Unit	QTR#1	QTR#2	QTR#1	QTR#2	
1. Fission	Gases						
	Ar-41	Ci	0.00E 00	0.00E 00	6.57E-0	1 2.31E-01	
	Kr-85m	Ci	0.00E 00	0.00E 00	0.00E 0	0.00E 00	
	Kr-85	Ci	0.00E 00	0.00E 00	0.00E 0	0.00E 00	
	Kr-87	Ci	0.00E 00	0.00E 00	0.00E 0	0.00E 00	
	Kr-88	Ci	0.00E 00	0.00E 00	0.00E 0	0.00E 00	
	Kr-89	Ci	0.00E 00	0.00E 00	0.00E 0	0.00E 00	
	Kr-90	Ci	0.00E 00	0.00E 00	0.00E 0	0.00E 00	
	Xe-127	Ci	0.00E 00	0.00E 00	0.00E 0	0.00E 00	
	Xe-131m	Ci	0.00E 00	0.00E 00	0.00E 0	0.00 E 00	
	Xe-133m	Ci	0.00E 00	0.00E 00	0.00E 0	0.00 E 00	
	Xe-133	Ci	0.00E 00	0.00E 00	6.65E-0	1 2.16 E- 01	
	Xe-135m	Ci	0.00E 00	0.00E 00.	0.00E 0	0.00E 00	
	Xe-135	Ci	0.00E 00	0.00E 00	3.20E-0	2 1.16E-02	
	Xe-137	Ci	0.00E 00	0.00 E 00	0.00E 0	0.00 E 00	
	Xe-138	Ci	0.00E 00	0.00 E 00	0.00E 0	0.00E 00	
Total for F	Period	Ci	0.00 E +00	0.00 E +00	1.35E+0	0 4.58E-01	
O I 45							
2. Iodines		Ci	2 04E 05	6 74E 05			
	I-131	Ci Ci	3.94E-05	6.74E-05			
	I-132	Ci Ci	0.00E 00	0.00E 00			
	I-133	Ci	1.45E-03 0.00E 00	2.39E-02 0.00E 00			
	I-134 I-135	Ci Ci	0.00E 00 0.00E 00	0.00E 00 0.00E 00			
Total for P		Ci Ci	1.49E-03	2.40E-02			
Total for F	CHOU	Ci	1.49E-03	2.40E-02			
3. Particu	lates (>8 I	Days)					
	Cr-51	Ci	0.00E 00	0.00E 00			
	Mn-54	Ci	0.00E 00	0.00E 00			
	Fe-55	Ci	0.00E 00	0.00E 00			
	Co-57	Ci	0.00E 00	0.00E 00			
	Co-58	Ci	0.00E 00	0.00E 00			
	Fe-59	Ci	0.00E 00	0.00E 00	•		
	C o-60	Ci	0.00E 00	1.02E-06			
	Zn-65	Ci	0.00E 00	0.00E 00			
•	Zr-95	Ci	0.00E 00	0.00E 00			
	Nb-95	Ci	0.00E 00	0.00E 00	·		

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TABLE 3.7-2 GASEOUS EFFLUENTS - GROUND LEVEL RELEASES (Continued)

	Nuclides Released	Unit	Continuous QTR#1	s Mode QTR#2
3. Particula	ites (> 8 Days) (continued)	1	
	Sr-89	Ci	0.00E 00	0.00E 00
	Sr-90	Ci	0.00E 00	0.00E 00
	Y-90	Ci	0.00E 00	0.00E 00
	Ru-103	Ci	0.00E 00	0.00E 00
	Ag-110m	Ci	0.00E 00	0.00E 00
	Sn-113	Ci	0.00E 00	0.00E 00
	Sb-124	Ci	0.00E 00	0.00E 00
	Sb-125	Ci	0.00E 00	0.00E 00
•	Te-129m	Ci	0.00E 00	0.00E 00
	Cs-134	Ci	0.00E 00	0.00E 00
	Cs-136	Ci	0.00E 00	0.00E 00
	Cs-137	Ci	1.79E-06	1.85E-06
	Ba-140	Ci	0.00E 00	0.00E 00
	Ce-141	Ci	0.00E 00	0.00E 00
	Ce-141	Ci	0.00E 00	0.00E 00
Total for Pe		Ci	1.79E-06	2.87E-06
10tal 101 1 C	nou	CI	1.7912-00	2.67L-00
4. Particula	tes (< 8 Days)			
*	Mn-56	Ci	0.00E 00	0.00E 00
	Ni-65	Ci	0.00E 00	0.00E 00
	Br-82	Ci	0.00E 00	0.00E 00
	Rb-88	Ci	0.00E 00	0.00E 00
	Rb-89 Sr-91	Ci Ci	0.00E 00 0.00E 00	0.00E 00 0.00E 00
,	Sr-92	Ci	0.00E 00 0.00E 00	0.00E 00 0.00E 00
	Y-92	Ci	0.00E 00 0.00E 00	0.00E 00 0.00E 00
	Zr-97	Ci	0.00E 00	0.00E 00
	Nb-97	Ci	0.00E 00	0.00E 00
	Tc-99m	Ci	0.00E 00	0.00E 00
	Mo-99	Ci	0.00E 00	0.00E 00
	Sb-122	Ci	0.00E 00	0.00E 00
	Te-129	Ci '	0.00E 00	0.00E 00
•	Te-132	Ci	$0.00E\ 00$	0.00E 00
	Cs-138	Ci	0.00E 00	0.00E 00
	La-140	Ci	0.00E 00	0.00E 00
	Pr-144	Ci	0.00E 00	0.00E 00
	W-187	Ci	0.00E 00	0.00E 00
	Np-239	Ci	0.00E 00	0.00E 00
Total for Per	noa	Ci	0.00E+00	0.00E+00

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 2 ANNUAL REPORT

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TABLE 3.7-2 GASEOUS EFFLUENTS - GROUND LEVEL RELEASES (Continued)

•	Nuclides	Continuous Mode			Batch	Batch Mode		
	Released	Unit	QTR#3	QTR#4	QTR#3	QTR#4		
•			•	•	•			
1. Fission				•				
	Ar-41	Ci	4.93E-01	0.00E 00	1.06E+00	$0.00E_{00}$		
	Kr-85m	Ci	0.00E 00	0.00E 00	2.91E-03	0.00E 00		
	Kr-85	Ci	0.00E 00	0.00E 00	6.14E-02	9.27E-02		
	Kr-87	· Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00		
	Kr-88	Ci	$0.00 \mathbf{E} \cdot 00$	0.00E 00	0.00E 00	0.00E 00		
	Kr-89 .	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00		
	Kr-90	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00		
	Xe-127	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00		
	Xe-131m	Ci	0.00E 00	0.00E 00	8.19E-03	0.00E 00		
	Xe-133m	Ci	0.00E 00	0.00E 00	3.56E-02	0.00E 00		
	Xe-133	Ci	0.00E 00	0.00E 00	3.85E+00	4.81E-03		
•	Xe-135m	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00		
	Xe-135	Ci	2.02E-01	0.00E 00	1.15E-01	0.00E 00		
	Xe-137	Ci	0.00E 00	0.00E 00	0.00E 00	0.00E 00		
	Xe-138	Ci	1.89E+00	0.00E 00	0.00E 00	0.00E 00		
Total for I		Ci	2.58E+00	0.00E+00	5.14E+00	9.75E-02		
						,,,,,		
2. Iodines	3							
	I-131	Ci	1.08E-04	2.36E-04				
	I-132	Ci	0.00E 00	0.00E 00				
	I-133	Ci	1.20E-02	7.31E-03				
:	I-134	Ci	0.00E 00	0.00E 00	•			
•	I-135	Ci	0.00E 00	0.00E 00				
Total for F	Period	Ci	1.21E-02	7.55E-03				
						•		
3. Particu	lates (> 8 Da	-			•			
	Cr-51	Ci	0.00E 00	0.00E 00				
	Mn-54 Fe-55	Ci Ci	0.00E 00	0.00E 00				
,	Co-57	Ci Ci	0.00E 00 0.00E 00	0.00E 00 0.00E 00				
	Co-58	Ci	2.48E-06	2.31E-06				
	Fe-59	Ci	0.00E 00	0.00E 00				
	Co-60	Ci	9.98E-07	0.00E 00 0.00E 00				
	Zn-65	Ci	9.98E-07 0.00E 00	0.00E 00 0.00E 00				
	Zn-65 Zr-95	Ci	0.00E 00 0.00E 00	0.00E 00 0.00E 00				
	Nb-95	Ci	0.00E 00	0.00E 00				

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TABLE 3.7-2 GASEOUS EFFLUENTS - GROUND LEVEL RELEASES (Continued)

11	DDD 5,7 Z GI	DECOD E	LIDOLIVIO	GROOND
			Continuous	s Mode
Ŋ	Nuclides	Unit	QTR#3	QTR#4
F	Released		-	
3. Particulate	es (> 8 Days) (continued)		
S	Sr-89	Ci	0.00E 00	0.00E 00
S	Sr-90	Ci	0.00E 00	0.00E 00
3	7-90	Ci	0.00E 00	0.00E 00
	Ru-103	Ci	0.00E 00	0.00E 00
	Ag-110m	Ci	0.00E 00	0.00E 00
	Sn-113	Ci	0.00E 00	0.00E 00
	5b-124	Ci	0.00E 00	0.00E 00
	5b-125	Ci	0.00E 00	0.00E 00
	Te-129m	Ci	0.00E 00	0.00E 00
	Cs-134	Ci	0.00E 00	0.00E 00
C	Cs-136	Ci	0.00E 00	0.00E 00
(Cs-137	Ci	2.11E-06	1.45E-06
E	Ba-140	Ci	0.00E 00	0.00E 00
C	Ce-141	Ci	0.00E 00	0.00E 00
C	Ce-144	Ci	0.00E 00	0.00E 00
Total for Peri	od	Ci	5.59E-06	3.76E-06
4. Particulate	es (<8 Days)			
	/In-56	Ci	0.00E 00	0.00E 00
	Ni-65	Ci	0.00E 00	0.00E 00
	3r-82	Ci	0.00E 00	0.00E 00
	kb-88	Ci	0.00E 00	0.00E 00
	kb-89	Ci	0.00E 00	0.00E 00
•	5r-91	Ci	0.00E 00	0.00E 00
	5r-92	Ci Ci	0.00E 00	0.00E 00
	7-92 7- 07	Ci	0.00E 00 0.00E 00	0.00E 00 0.00E 00
	Zr-97 Nb-97	Ci	0.00E 00 0.00E 00	0.00E 00 0.00E 00
	Cc-99m	Ci	0.00E 00 0.00E 00	0.00E 00
	10-99	Ci	0.00E 00	0.00E 00
	b-122	Ci	0.00E 00	0.00E 00
	e-129	Ci	0.00E 00	0.00E 00
	e-132	Ci	0.00E 00	0.00E 00
C	Cs-138	Ci	0.00E 00	0.00E 00
L	a-140	Ci	0.00E 00	0.00E 00
	r-144	Ci	0.00E 00	0.00E 00
	V-187	Ci	0.00E 00	0.00E 00
	Ip-239	Ci	0.00E 00	0.00E 00
Total for Peri-	od	Ci	0.00 E +00	0.00E+00

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TABLE 3.8-1 GASEOUS EFFLUENTS - DOSE SUMMATION

AGE GROUP: Infant

	Bone	Liver	Thyroid	Kidney
Dose Pathway	mrem	mrem	mrem	mrem
Inhalation	5.41E-08	4.58E-04	4.60E-04	2.00E-04
Grass-Goat-Milk	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ground Plane	8.80E-05	5.25E-03	6.25E-03	2.25E-03
Garden	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Meat	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total Dose	8.80E-05	5.71E-03	6.71E-03	2.45E-03

	Lung	GI-LLI	Total Body
Dose Pathway	mrem	mrem	mrem
Inhalation	4.59E-04	4.58E-04	4.58E-04
Grass-Goat-Milk	5.16E-03	5.15E-03	5.16E-03
Ground Plane	0.00E+00	0.00E+00	4.11E-05
Garden	0.00E+00	0.00E+00	0.00E+00
Meat	0.00E+00	0.00E+00	0.00E+00
Total Dose	5.62E-03	5.61E-03	5.66E-03

(a) Sec	ctor: SE	Range:	1.5	miles	
(b) Sec	ctor: W	Range:	4.25	miles(default)	

Noble Gases	mrad
Gamma Air Dose	1.21E-03
Beta Air Dose	5.70E-04

Sector: SE

Range: 1.5 miles

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 2 ANNUAL REPORT JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

TABLE 3.8-2 GASEOUS EFFLUENTS - DOSE SUMMATION

AGE GROUP: Infant

	Bone	Liver	Thyroid	Kidney
Dose Pathway	mrem	mrem	mrem	mrem
Inhalation	1.03E-05	5.45E-04	4.10E-03	2.35E-04
Grass-Goat-Milk	4.96E-04	6.60E-03	1.33E-01	2.72E-03
Ground Plane	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Garden	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Meat	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total Dose	5.06E-04	7.15E-03	1.37E-01	2.96E-03

	Lung	GI-LLI	Total Body
Dose Pathway	mrem	mrem	mrem
Inhalation	5.30E-04	5.32E-04	5.35E-04
Grass-Goat-Milk	5.99E-03	6.03E-03	6.17E-03
Ground Plane	0.00E+00	0.00E+00	4.02E-05
Garden	0.00E+00	0.00E+00	0.00E+00
Meat	0.00E+00	0.00E+00	0.00E+00
Total Dose	6.52E-03	6.56E-03	6.74E-03

(a) Sector : SE	Range:	1.5	miles
(b) Sector: W	Range:	4.25	miles(default)

Noble Gases	mrad
Gamma Air Dose	1.71E-03
Beta Air Dose	9.35E-04

Sector: SE

Range: 1.5 miles

FLORIDA POWER AND LIGHT COMPANY ST. LUCIE PLANT ANNUAL REPORT JANUARY 1, 2007 THROUGH DECEMBER 31, 2007 UNITS 1 AND 2, TABLE 3.9

A. Solid Waste Shipped Off-Site for Burial or Disposal

1. Type of Waste	Unit	12 Mo. Period	Error %
a. Spent Resin, Process Filters (Note 6)	M3 Ci	4.38E+0 4.08E+2	2.0 E+1
b. Dry Compressible Waste (Note 5)	M3 Ci	3.62E+2 1.36E+1	2.0 E+1
c. Irradiated Components	M3 Ci	0	N/A*
d. Other	M3 Ci	0	N/A*

2. Estimate of Major Nuclide Composition (By Waste Type)

Category	Nuclides	%
a.	Ni 63 Fe 55 Co 60 Cs 137 Co 58 Mn 54 Cs 134 Sb 125	5.44E+1 1.97E+1 9.68E+0 4.78E+0 3.09E+0 2.79E+0 2.10E+0 8.10E-1
b.	Fe 55 Ni 63 Co 60 Co 58 Cr 51 Nb 95 Mn 54 Zr 95	4.95E+1 2.34E+1 1.02E+1 8.91E+0 2.50E+0 1.29E+0 1.27E+0 6.80E-1
C.	N/A*	N/A*
d.	N/A*	N/A*

FLORIDA POWER AND LIGHT COMPANY ST. LUCIE PLANT ANNUAL REPORT JANUARY 1, 2007 THROUGH DECEMBER 31, 2007 UNITS 1 AND 2, TABLE 3.9 (CONTINUED)

3. Solid Waste Disposition

	Number of Shipments	Mode of Transportation	Destination
	1	Sole Use Truck	CNS- Barnwell, SC
	60	Sole Use Truck	EnergySolutions- Oak Ridge, TN
	30	Sole Use Truck	Studsvik/RACE- Memphis, TN
	8	Sole Use Truck	Studsvik LLC- Erwin, TN
B. In	radiated Fuel Shipments		
	Number of Shipments	Mode of Transportation	Destination
	0	N/A*	N/A*

^{*}N/A = Not Applicable

FLORIDA POWER AND LIGHT COMPANY ST. LUCIE PLANT ANNUAL REPORT JANUARY 1, 2007 THROUGH DECEMBER 31, 2007 UNITS 1 AND 2, TABLE 3.9 (CONTINUED)

Waste Class	Total Volume	Total Curies	Principal	Type of Waste	Category	Type of	Solidification
	Cubic Feet	(Note 1)	Radionuclides (Notes 1 and 2)	(Note 3)	Reg. Guide 1.21	Container (Note 4)	Agent
Class A	12,665.50	5.00E+0	N/A	PWR Compressible Waste (note 5)	1.b.	Non- Specification General Design Package	None
Class B	68.35	2.01E+2	Co 60, Ni 63, Cs 137, Sr 90, Pu 241, TRU, Nuclides with T1/2 < 5yr.	PWR lon- Exchange Resin (note 6)	1.a.	NRC Certified Type B	None
Class C	86.38	2.07E+2	Co 60, Ni 63, Cs 137, Sr 90, Pu 241, Nuclides with T1/2 < 5yr.	PWR Ion- Exchange Resin (note 6)	1.a.	NRC Certified Type B	None
Class C	132.40	8.58E+0	Ni 63, Cs 137, TRU, Pu 241	PWR Compressible Waste	1.b.	DOT 7A, Type A	None

FLORIDA POWER AND LIGHT COMPANY ST. LUCIE PLANT ANNUAL REPORT JANUARY 1, 2007 THROUGH DECEMBER 31, 2007 UNITS 1 AND 2, TABLE 3.9 (CONTINUED)

SOLID WASTE SUPPLEMENT

NOTE 1:

The total radionuclide activity and composition of solid waste shipped from the St. Lucie Plant, Units 1 and 2 are determined using a combination of qualitative techniques. In general, the St. Lucie Plant follows the guidelines outlined in the Low Level Waste Branch Technical Position (BTP) on Radioactive Waste Classification (5/11/83) for these determinations. The most frequently used techniques for determining the total activity in a package are the "Dose—to-Curie" method and "Concentration Times Volume or Mass" calculations. Where appropriate, engineering type activation analyses may be applied. Since each of the above methodologies involves, to some extent, qualitative parameters, the total activity is considered to be an estimate.

The composition of radionuclides in the waste is determined by both on-site analyses for principal gamma emitters and periodic off-site analyses for other radionuclides. The on-site analyses are performed either on a batch basis or on a routine basis using reasonably representative samples as appropriate for the waste type. Off-site analyses are used to establish scaling factors or other estimates for radionuclides such as H3, C14, Fe55, Sr90, Tc99, I129, Pu238, Pu239/240, Pu241, Am241, Cm242 and Cm243/244.

NOTE 2:

"Principal Radionuclides" refer to those radionuclides contained in the waste in concentrations greater than 0.01 times the concentration of nuclides listed in Table 1 or 0.01 times the smallest concentration of nuclides listed in Table 2 of 10 CFR 61.

NOTE 3:

"Type of Waste" is generally specified as described in NUREG 0782, Draft Environmental Impact Statement on 10 CFR 61, "Licensing Requirements for Land Disposal of Radioactive Waste".

NOTE 4:

"Type of Container" refers to the transport package.

NOTE 5:

The volume and activity listed for "Dry Compressible Waste" represent the quantity of material that during the reporting period was sent to the licensed disposal facilities. Some of this material was shipped to a contract vendor for volume reduction or recycle prior to final disposal at the licensed disposal facilities. During the reporting period, ninety (90) shipments of dry active waste, secondary bead resin and non-compressible waste (104,027.8 cubic feet, 5.20 E+0 curies) were made from the St. Lucie Plant to the volume reduction facilities. These materials were shipped via "Sole Use Truck" in non-specification, general design containers.

NOTE 6:

The volume and activity listed for "Spent Resin, Process Filters" represent the quantity of material that during the reporting period was sent to the licensed disposal facilities. Some of this material was shipped to a contracted vendor as dewatered bead resin and process filters for volume reduction prior to final disposal at the licensed disposal facility. During the reporting period, eight (8) shipments of bead resin and process filters (1,003.4 cubic feet, 4.34E+2 curies) were made from the St. Lucie Plant to the contract vendor for volume reduction and disposal.

FLORIDA POWER AND LIGHT COMPANY ST. LUCIE UNITS NO. 1 AND 2 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

ATTACHMENT A INFORMATION FOR INDUSTRY TRITIUM INITIATIVE

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 1 & 2 ANNUAL REPORT JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

ATTACHMENT - A Information for Industry Tritium Initiative

Well ID	H3 March 2007	H3 May 2007	H3 June 2007	H3 July 2007	H3 Aug 2007	H3 Sep 2007	H3 Oct 2007	H3 Nov 2007	H3 Dec 2007
Diesel - Unit 1 & 2	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l
MW-1	450		450			450			
MW-3	790	640	1030	810	780	450	540	450	570
MW-4	4400	8000	3990	5020	4550	1030	540	2160	
MW-5	450		450			450			
MW-6	1640	15120	6940	3300	2470	2390	21890	3170	1470
MW-7	450		450			450			
MW-9	450		450			450			
MW-10	450		450			450			
MW-11	450		520			450			
MW-12	450		450			450			
MW-13	450		450			450			
MW-15	540	540	450	450	560	450	450	450	
MW-16	450		450			450			
MVV-17	520	540	450	450	520	450	540	450	
MW-18D	770	450	450	450	450	450			
MW-19	450		450			450			
MW-20	450		450			450			
MW-21	450		450			450			
MW-22D	450		450			450			
MW-24	450		450			450			
MVV-25	450		450			450			
MW-26	450		450			450			
RW-1	840	520	450	450	450	450			
RW-2	4210	5830	4750	5090	6960	8050	12910	22910	22760
RW-3	450		450			450			
RW-4	450		450			450			
RW-5	450		450			450			

Well ID	H3 March 2007	H3 May 2007	H3 June 2007	H3 July 2007	H3 Aug 2007	H3 Sep 2007	H3 Oct 2007	H3 Nov 2007	H3 Dec 2007
TLO Wells	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l
Unit 1 - MW001	4450	7740	450	450	670	450	· 6010	2350	2050
Unit 1 - MW002	3950	3600	2910	2810	3550	2560	3130	2300	810
Unit.1 - MW003	7450	9270	4480	1550		3610	450	450	860
Unit 1 - MW004	970	850	450	560	1150	450	830	450	450
Unit 2 - MW001	730	450	520	550	730		450	450	450
Unit 2 - MW002	4240	8360	5940	5460	3840	6750	9160	2800	2790
Unit 2 - MW003	1760	1930	1690	2050	1970	1710			2100

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 1 & 2 ANNUAL REPORT

JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

ATTACHMENT - A Information for Industry Tritium Initiative (Continued)

Well ID	H3 March 2007	H3 May 2007	H3 June 2007	H3 July 2007	H3 Aug 2007	H3 Sep 2007	H3 Oct 2007	H3 Nov 2007	H3 Dec 2007
Mixed Plume	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l
MW-1	450		450			450			
MW-3	450		450			450			
MW-4	890	500	450	760	660	450	490	510	810
MW-5	870	1190	1040	1480	450	870	1300	1000	1480
MW-6	450		450			450			
MW-7A	450		450			450			
MW-10	450		450			450			
MW-11	750	790	500	1010	1220	1320	1180	1140	950
MW-12	450		450			450			
MW-13D	450		450			450			
MW-14	450		450			450			
MW-15D	700	450	450	890	450	490	460	450	700

Well ID	H3 March 2007	H3 May 2007	H3 June 2007	H3 July 2007	H3 Aug 2007	H3 Sep 2007	H3 Oct 2007	H3 Nov 2007	H3 Dec 2007
Neutralization Basin	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l
PSLED - 1	450		450						
PSLED - 2	450					450			
PSLED - 3	450								
PSLED - 4	450								
MW-1	450		450			450			
MW-2	450					450			

Well ID	H3 March 2007	H3 May 2007	H3 June 2007	H3 July 2007	H3 Aug 2007	H3 Sep 2007	H3 Oct 2007	H3 Nov 2007	H3 Dec 2007
Permeter Wells	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l
MW-Ei		450	450	450	460	450	450	650	790
MW-Es		450	450	450	450	450	450	450	450
MW-Si		450	450	450	450	450	450	450	450
MW-SWs		450	450	450	450	450	450	450	450
MW-SWi		450	450	450	450	450	450	450	450
MW-Wi		450	450	450	. 450	450	450	450	450

FLORIDA POWER AND LIGHT COMPANY ST. LUCIE UNITS NO. 1 AND 2 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

ATTACHMENT B RADIATION MONITORS OUT OF SERVICE GREATER THAN 30 DAYS

FLORIDA POWER & LIGHT COMPANY ST. LUCIE UNIT # 1 & 2 ANNUAL REPORT JANUARY 1, 2007 THROUGH DECEMBER 31, 2007

ATTACHMENT - B

Radiation Monitors Out of Service Greater Than 30 Days

The Unit 1 Liquid Waste Discharge Radiation Monitor, RE-6627, was out of service for most of the year. The monitor was declared out of service due to problems with the flow switch. The flow switch was causing erroneous annunciation due to debris accumulating on the contacts of the switch. On 4/20/07, a modification was issued to replace the switch with a non intrusive style of switch. Parts were ordered and installation of the modification started on 6/6/07. During the post modification testing process it was determined that the new style flow switch required a larger surface area to properly perform its function. A Change Request Notice was issued to increase the size of the sample line. During the calibration surveillance on 8/1/07, the monitor failed to pass calibration. Troubleshooting identified a voltage drop at the detector which was later determined to be a bad cable harness. A new cable harness was installed and the calibration was successfully completed on 10/20/07. Presently the new piping for the flow switch is being installed. The monitor was returned to service in January 2008.