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February 28, 1992

L-92-43
10 CFR 50.36

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

Gentlemen:

Re: St. Lucie Units 1 and 2
Docket Nos. 50-335 and 50-389
Semi-Annual Radioactive Effluent Release Report

Attached is the Radioactive Effluent Release Report for the period of July 1, 1991, through December 31, 1991, for St. Lucie Units 1 and 2. This report is required by Technical Specification 6.9.1.7.

Attachment A to the report is an event description that was inadvertently left out of the January 1, 1991, through June 30, 1991, Semi-Annual Radioactive Effluent Release Report.

Should there be any questions on this information, please contact us.

Very truly yours,

D.A. SAGER

By J.J. Barrow

D. A. Sager
Vice President
St. Lucie Plant

DAS:JJB:kw

cc: Stewart D. Ebneter, Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, St. Lucie Plant

Attachment

DAS/PSL #628-92

IE48
1/1

FLORIDA POWER & LIGHT COMPANY

ST. LUCIE PLANT UNITS NO. 1 & 2

LICENSE NUMBERS DPR-67 & NPF-16

COMBINED SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

FOR THE PERIOD

JULY 1, 1991 THROUGH DECEMBER 31, 1991

TABLE OF CONTENTS

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 the concentrations specified in 10 CFR Part 20 Appendix B, Table II, 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 Iodine-131, Iodine-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 reactor 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 Iodine-131, Iodine-133, Tritium, and all radionuclides in particulate form, with half-lives > 8 Days in gaseous effluents released, from each reactor 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 a semi-annual report shall not apply to any STS LCO. The reported values are based on actual release conditions instead of historical conditions that the STS LCO dose calcuations are based on. The STS LCO dose limits are therefore included in Item 1 of the report, for information only.

EFFLUENT AND WASTE DISPOSAL SUPPLEMENTAL INFORMATION
(Continued)

2. Maximum Permissible Concentrations

   Water: As per 10 CFR Part 20, Appendix B, Table II, 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 Plant Technical Specification 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		GASEOUS	
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 %	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.

EFFLUENT AND WASTE DISPOSAL SUPPLEMENTAL INFORMATION
(Continued)

4. Measurements and Approximations of Total Radioactivity (Cont.)
   4.1 (Continued)
   B. (Continued)

TABLE 3.1

RADIOACTIVE LIQUID EFFLUENT SAMPLING AND ANALYSIS

Liquid Source	Sampling Frequency	Type of Analysis	Method of Analysis
Monitor Tank 1	Each Batch	Principal Gamma Emitters	p.h.a.
	Monthly Composite	Tritium	L.S.
		Gross Alpha	G.F.P.
	Quarterly Composite	Sr-89, Sr-90, & Fe-55	C.S.
Releases	Daily Grab Samples	Principal Gamma Emitters & I-131 for 4/M Composite Analysis	p.h.a.
		Dissolved & Entrained Gases One Batch/ Month	p.h.a.
		Tritium Composite Monthly	L.S.
		Alpha Composite Monthly	G.F.P.
		Sr-89, Sr-90, & Fe-55 Composite Quarterly	C.S.
Continuous Releases			

1-Boric Acid Evaporator Condensate is normally recovered to the Primary Water Storage Tank for recycling into the reactor coolant system and does not contribute to Liquid Waste Effluent Totals.
p.h.a.-Gamma Spectrum Pulse Height Analysis using Lithium Germanium Detectors. All peaks are identified and quantified.
L.S.-Liquid Scintillation Counting
C.S.-Chemical Separation
G.F.P.-Gas Flow Proportional Counting
4/M-Four per Month

EFFLUENT AND WASTE DISPOSAL SUPPLEMENTAL INFORMATION
(Continued)

4. Measurements and Approximations of Total Radioactivity (Continued)
   4.1 (Continued)
      B. (Continued)

TABLE 3.2

RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS

Gaseous Source	Sampling Frequency	Type of Analysis	Method of 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	G.F.P.
	Quarterly Composite	Particulate Sr-89 & Sr-90	C.S.

p.h.a.-Gamma Spectrum Pulse Height Analysis using Lithium Germanium Detectors. All peaks are identified and quantified.
L.S.-Liquid Scintillation Counting
C.S.-Chemical Separation
G.F.P.-Gas Flow Proportional Counting
4/M-Four per Month

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT # 1
SEMIANNUAL REPORT
JULY 1, 1991 THROUGH DECEMBER 31, 1991

EFFLUENT & WASTE DISPOSAL - SUPPLEMENTAL INFORMATION (CONTINUED)

5. Batch Releases

A. Liquid

1.	Number of batch releases:	34	
2.	Total time period for batch releases:	14563	minutes
3.	Maximum time period for a batch release:	571	minutes
4.	Average time period for a batch release:	428	minutes
5.	Minimum time period for a batch release:	303	minutes
6.	Average dilution stream flow during the period:	850185	gpm

All liquid releases are summarized in tables.

B. Gaseous

1.	Number of batch releases:	24	
2.	Total time period for batch releases:	10622	minutes
3.	Maximum time period for a batch release:	1150	minutes
4.	Average time period for a batch release:	443	minutes
5.	Minimum time period for a batch release:	79	minutes

All gaseous waste releases are summarized in tables.

6. Unplanned Releases

A. Liquid

1.	Number of releases:	0	
2.	Total activity of releases:	0.00E+00	Curies

B. Gaseous

1.	Number of releases:	0	
2.	Total activity of releases:	0.00E+00	Curies

C. See attachments (if applicable) for:

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.

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT # 2
SEMIANNUAL REPORT
JULY 1, 1991 THROUGH DECEMBER 31, 1991
EFFLUENT & WASTE DISPOSAL - SUPPLEMENTAL INFORMATION (CONTINUED)

5. Batch Releases

A. Liquid

1.	Number of batch releases:	34	
2.	Total time period for batch releases:	14563	minutes
3.	Maximum time period for a batch release:	571	minutes
4.	Average time period for a batch release:	428	minutes
5.	Minimum time period for a batch release:	303	minutes
6.	Average dilution stream flow during the period:	850185	gpm

All liquid releases are summarized in tables.

B. Gaseous

1.	Number of batch releases:	73	
2.	Total time period for batch releases:	13766	minutes
3.	Maximum time period for a batch release:	708	minutes
4.	Average time period for a batch release:	189	minutes
5.	Minimum time period for a batch release:	11	minutes

All gaseous waste releases are summarized in tables.

6. Unplanned Releases

A. Liquid

1.	Number of releases:	0	
2.	Total activity of releases:	0.00E+00	Curies

B. Gaseous

1.	Number of releases:	0	
2.	Total activity of releases:	0.00E+00	Curies

C. See attachments (if applicable) for:

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.

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANTS UNITS 1 & 2

SEMIANNUAL REPORT

JULY 1, 1991 THROUGH DECEMBER 31, 1991

EFFLUENT AND WASTE DISPOSAL SUPPLEMENTAL INFORMATION (Continued)

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 180 days per year at a distance of 1.6 kilometers in the South East Sector. The VISITOR received exposure from each of the two reactor units on the Site.

VISITOR DOSE RESULTS FOR CALENDAR YEAR 1991 were:

NOBLE GAS EXPOSURE	DOSE (mrad)
Gamma Air Dose	1.07 E-02
Beta Air Dose	2.02 E-02

GASEOUS PARTICULATE & IODINE EXPOSURE	DOSE (mRem)
Bone	3.85 E-06
Liver	2.70 E-04
Thyroid	1.65 E-03
Kidney	1.17 E-04
Lung	2.69 E-04
GI-LLI	2.65 E-04
Total Body	3.49 E-04

8. Offsite Dose Calculation Manual Revisions (ODCM): The ODCM was not revised during the reporting interval.

9. 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 are provided on Page 24.

10. Process Control Program (PCP) Revisions: The PCP was not revised during the reporting interval.

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT # 1
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TABLE 3.3-1 LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

	UNIT	QTR#3	QTR#4
A. Fission and Activation Products			
1. Total Release - (Not including Tritium, Gases, and Alpha)	Ci	1.02E-01	2.21E-01
2. Average Diluted Concentration During Period	uci/ml	2.01E-10	6.40E-10
B. Tritium			
1. Total Release	Ci	1.35E+02	8.28E+01
2. Average Diluted Concentration During Period	uci/ml	2.66E-07	2.40E-07
C. Dissolved and Entrained Gases			
1. Total Release	Ci	1.16E-02	1.02E-02
2. Average Diluted Concentration During Period	uci/ml	2.28E-11	2.95E-11
D. Gross Alpha Radioactivity			
1. Total Release	Ci	0.00E+00	0.00E+00
E. Volume of Waste Released (Prior to Dilution)	Liters	2.59E+07	1.73E+07
F. Volume of Dilution Water Used During Period	Liters	5.07E+11	3.45E+11

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT # 2
SEMIANNUAL REPORT
JULY 1, 1991 THROUGH DECEMBER 31, 1991

TABLE 3.3-2 LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

	UNIT	QTR#3	QTR#4
A. Fission and Activation Products			
1. Total Release - (Not including Tritium, Gases, and Alpha)	Ci	2.82E-02	2.19E-01
2. Average Diluted Concentration During Period	uci/ml	5.55E-11	6.34E-10
B. Tritium			
1. Total Release	Ci	1.35E+02	8.28E+01
2. Average Diluted Concentration During Period	uci/ml	2.66E-07	2.40E-07
C. Dissolved and Entrained Gases			
1. Total Release	Ci	1.16E-02	7.43E-03
2. Average Diluted Concentration During Period	uci/ml	2.28E-11	2.15E-11
D. Gross Alpha Radioactivity			
1. Total Release	Ci	0.00E+00	0.00E+00
E. Volume of Waste Released (Prior to Dilution)	Liters	1.89E+06	1.99E+06
F. Volume of Dilution Water Used During Period	Liters	5.07E+11	3.45E+11

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT # 1
SEMIANNUAL REPORT
JULY 1, 1991 THROUGH DECEMBER 31, 1991

TABLE 3.4-1 LIQUID EFFLUENTS

NUCLIDES RELEASED	UNIT	Continuous Mode QTR#3	Continuous Mode QTR#4	Batch Mode QTR#3	Batch Mode QTR#4
NA-24	Ci	0.00E+00	0.00E+00	0.00E+00	1.24E-03
CR-51	Ci	0.00E+00	0.00E+00	5.61E-05	9.57E-03
MN-54	Ci	0.00E+00	0.00E+00	2.11E-04	5.86E-04
FE-55	Ci	7.40E-02	0.00E+00	4.93E-03	0.00E+00
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	1.84E-05
CO-58	Ci	0.00E+00	0.00E+00	6.24E-04	2.72E-02
FE-59	Ci	0.00E+00	0.00E+00	0.00E+00	1.04E-04
CO-60	Ci	0.00E+00	0.00E+00	1.30E-02	2.44E-02
ZN-65	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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	5.00E-04	0.00E+00
SR-89	Ci	0.00E+00	0.00E+00	0.00E+00	3.70E-05
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	1.61E-05	0.00E+00
ZR-95	Ci	0.00E+00	0.00E+00	4.32E-05	6.37E-04
NB-95	Ci	0.00E+00	0.00E+00	1.82E-04	1.81E-03
ZR-97	Ci	0.00E+00	0.00E+00	6.50E-05	0.00E+00
NB-97	Ci	0.00E+00	0.00E+00	9.64E-04	5.75E-03
TC-99M	Ci	0.00E+00	0.00E+00	6.13E-06	3.81E-06
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	4.84E-05
AG-110	Ci	0.00E+00	0.00E+00	7.77E-04	4.98E-03
SN-113	Ci	0.00E+00	0.00E+00	3.71E-05	2.73E-05
SB-122	Ci	0.00E+00	0.00E+00	0.00E+00	3.54E-03
SB-124	Ci	0.00E+00	0.00E+00	2.17E-05	4.26E-02
SB-125	Ci	0.00E+00	0.00E+00	4.80E-03	2.68E-02

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT # 1
SEMIANNUAL REPORT
JULY 1, 1991 THROUGH DECEMBER 31, 1991

TABLE 3.4-1 LIQUID EFFLUENTS (CONTINUED)

NUCLIDES RELEASED	UNIT	Continuous Mode QTR#3	Continuous Mode QTR#4	Batch Mode QTR#3	Batch Mode QTR#4
TE-129	Ci	0.00E+00	0.00E+00	0.00E+00	4.59E-03
TE-129M	Ci	0.00E+00	0.00E+00	0.00E+00	3.02E-04
I-131	Ci	0.00E+00	1.67E-04	6.54E-04	2.15E-03
TE-132	Ci	0.00E+00	0.00E+00	0.00E+00	2.07E-04
I-132	Ci	0.00E+00	0.00E+00	0.00E+00	4.30E-04
I-133	Ci	0.00E+00	0.00E+00	1.35E-04	5.99E-05
I-134	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CS-134	Ci	0.00E+00	8.29E-04	3.77E-04	2.22E-02
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	1.58E-04
CS-137	Ci	0.00E+00	8.45E-04	7.27E-04	2.83E-02
CS-138	Ci	0.00E+00	0.00E+00	6.40E-06	1.30E-03
BA-140	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LA-140	Ci	0.00E+00	0.00E+00	2.07E-05	5.03E-04
CE-141	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CE-144	Ci	0.00E+00	0.00E+00	1.36E-05	0.00E+00
PR-144	Ci	0.00E+00	0.00E+00	0.00E+00	9.49E-03
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	7.40E-02	1.84E-03	2.82E-02	2.19E-01
AR-41	CI	0.00E+00	0.00E+00	0.00E+00	4.13E-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	3.10E-03
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	0.00E+00	0.00E+00
XE-133M	CI	0.00E+00	0.00E+00	4.63E-05	0.00E+00
XE-133	CI	0.00E+00	2.75E-03	1.11E-02	4.20E-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	4.87E-04	1.22E-04

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT # 2
SEMIANNUAL REPORT
JULY 1, 1991 THROUGH DECEMBER 31, 1991

TABLE 3.4-2 LIQUID EFFLUENTS

NUCLIDES RELEASED	UNIT	Continuous Mode QTR#3	Continuous Mode QTR#4	Batch Mode QTR#3	Batch Mode QTR#4
NA-24	CI	0.00E+00	0.00E+00	0.00E+00	1.24E-03
CR-51	CI	0.00E+00	0.00E+00	5.61E-05	9.57E-03
MN-54	CI	0.00E+00	0.00E+00	2.11E-04	5.86E-04
FE-55	CI	0.00E+00	0.00E+00	4.93E-03	0.00E+00
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	1.84E-05
CO-58	CI	0.00E+00	0.00E+00	6.24E-04	2.72E-02
FE-59	CI	0.00E+00	0.00E+00	0.00E+00	1.04E-04
CO-60	CI	0.00E+00	0.00E+00	1.30E-02	2.44E-02
ZN-65	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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	5.00E-04	0.00E+00
SR-89	CI	0.00E+00	0.00E+00	0.00E+00	3.70E-05
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	1.61E-05	0.00E+00
ZR-95	CI	0.00E+00	0.00E+00	4.32E-05	6.37E-04
NB-95	CI	0.00E+00	0.00E+00	1.82E-04	1.81E-03
ZR-97	CI	0.00E+00	0.00E+00	6.50E-05	0.00E+00
NB-97	CI	0.00E+00	0.00E+00	9.64E-04	5.75E-03
TC-99M	CI	0.00E+00	0.00E+00	6.13E-06	3.81E-06
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	4.84E-05
AG-110	CI	0.00E+00	0.00E+00	7.77E-04	4.98E-03
SN-113	CI	0.00E+00	0.00E+00	3.71E-05	2.73E-05
SB-122	CI	0.00E+00	0.00E+00	0.00E+00	3.54E-03
SB-124	CI	0.00E+00	0.00E+00	2.17E-05	4.26E-02
SB-125	CI	0.00E+00	0.00E+00	4.80E-03	2.68E-02

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT # 2
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TABLE 3.4-2 LIQUID EFFLUENTS (CONTINUED)

NUCLIDES RELEASED	UNIT	Continuous Mode QTR#3	Continuous Mode QTR#4	Batch Mode QTR#3	Batch Mode QTR#4
TE-129	CI	0.00E+00	0.00E+00	0.00E+00	4.59E-03
TE-129M	CI	0.00E+00	0.00E+00	0.00E+00	3.02E-04
I-131	CI	0.00E+00	0.00E+00	6.54E-04	2.15E-03
TE-132	CI	0.00E+00	0.00E+00	0.00E+00	2.07E-04
I-132	CI	0.00E+00	0.00E+00	0.00E+00	4.30E-04
I-133	CI	0.00E+00	0.00E+00	1.35E-04	5.99E-05
I-134	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CS-134	CI	0.00E+00	0.00E+00	3.77E-04	2.22E-02
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	1.58E-04
CS-137	CI	0.00E+00	0.00E+00	7.27E-04	2.83E-02
CS-138	CI	0.00E+00	0.00E+00	6.40E-06	1.30E-03
BA-140	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LA-140	CI	0.00E+00	0.00E+00	2.07E-05	5.03E-04
CE-141	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CE-144	CI	0.00E+00	0.00E+00	1.36E-05	0.00E+00
PR-144	CI	0.00E+00	0.00E+00	0.00E+00	9.49E-03
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	2.82E-02	2.19E-01
AR-41	CI	0.00E+00	0.00E+00	0.00E+00	4.13E-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	3.10E-03
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	0.00E+00	0.00E+00
XE-133M	CI	0.00E+00	0.00E+00	4.63E-05	0.00E+00
XE-133	CI	0.00E+00	0.00E+00	1.11E-02	4.20E-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	4.87E-04	1.22E-04

FLORIDA POWER AND LIGHT COMPANY

ST. LUCIE UNIT NO. 1

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TABLE 3.5-1

LIQUID EFFLUENTS - DOSE SUMMATION

AGE GROUP: ADULT LOCATION: ANY ADULT

EXPOSURE INTERVAL: JANUARY 1, 1991 THROUGH DECEMBER 31, 1991

FISH AND SHELLFISH CALENDER YEAR

ORGAN	DOSE (mrem)
BONE	5.56E-02
LIVER	2.45E-01
THYROID	2.52E-03
KIDNEY	2.13E-03
LUNG	2.84E-01
GI-LLI	1.52E-01
TOTAL BODY	6.79E-02

FLORIDA POWER AND LIGHT COMPANY

ST. LUCIE UNIT NO. 2

SEMI-ANNUAL REPORT

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TABLE 3.5-1

LIQUID EFFLUENTS - DOSE SUMMATION

AGE GROUP: ADULT LOCATION: ANY ADULT

EXPOSURE INTERVAL: JANUARY 1, 1991 THROUGH DECEMBER 31, 1991

FISH AND SHELLFISH CALENDER YEAR

ORGAN	DOSE (mrem)
BONE	8.45E-03
LIVER	3.26E-02
THYROID	2.42E-03
KIDNEY	2.09E-03
LUNG	3.75E-02
GI-LLI	6.87E-02
TOTAL BODY	1.20E-02

FLORIDA POWER & LIGHT COMPANY

ST. LUCIE UNIT # 1

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TABLE 3.6-1 GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

		UNIT	QTR#3	QTR#4
A.	Fission and Activation Gases			
	1. Total Release	Ci	1.04E+03	3.69E+02
	2. Average Release Rate For Period	uCi/sec	1.31E+02	4.64E+01
B.	Iodines			
	1. Total Iodine-131	Ci	4.10E-04	1.50E-03
	2. Average Release Rate For Period	uCi/sec	5.15E-05	1.88E-04
C.	Particulates			
	1. Particulates (Half Life > 8 days)	Ci	2.03E-05	8.05E-05
	2. Average Release Rate For Period	uCi/sec	2.55E-06	1.01E-05
	3. Gross Alpha Radioactivity	Ci	3.07E-08	2.81E-08
D.	Tritium			
	1. Total Release	Ci	3.26E+00	9.87E+00
	2. Average Release Rate For Period	uCi/sec	4.10E-01	1.24E+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#3	QTR#4
A.	Fission and Activation Gases			
	1. Total Release	Ci	1.44E+02	1.47E+02
	2. Average Release Rate For Period	uCi/sec	1.81E+01	1.84E+01
B.	Iodines			
	1. Total Iodine-131	Ci	9.28E-04	3.69E-04
	2. Average Release Rate For Period	uCi/sec	1.17E-04	4.64E-05
C.	Particulates			
	1. Particulates (Half Life > 8 days)	Ci	0.00E+00	0.00E+00
	2. Average Release Rate For Period	uCi/sec	0.00E+00	0.00E+00
	3. Gross Alpha Radioactivity	Ci	1.35E-08	4.15E-08
D.	Tritium			
	1. Total Release	Ci	2.14E+01	2.77E+01
	2. Average Release Rate For Period	uCi/sec	2.70E+00	3.49E+00

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT # 1
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TABLE 3.7-1 GASEOUS EFFLUENTS - GROUND LEVEL RELEASES

Nuclides Released	Unit	Continuous Mode QTR#3	Continuous Mode QTR#4	Batch Mode QTR#3	Batch Mode QTR#4
1. Fission Gases					
AR-41	Ci	0.00E+00	0.00E+00	4.92E-03	1.35E-01
KR-85M	Ci	1.33E+01	1.38E+00	1.59E-01	3.99E-01
KR-85	Ci	0.00E+00	0.00E+00	1.08E+01	2.49E+01
KR-87	Ci	1.22E+00	0.00E+00	1.06E-03	1.30E-02
KR-88	Ci	1.47E+01	0.00E+00	3.70E-02	2.95E-01
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	1.22E+00	9.11E-01
XE-133M	Ci	1.06E+01	0.00E+00	3.09E+00	2.16E+00
XE-133	Ci	6.43E+02	2.00E+02	1.78E+02	1.08E+02
XE-135M	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
XE-135	Ci	1.58E+02	2.30E+01	4.27E+00	7.51E+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 PERIOD	Ci	8.41E+02	2.24E+02	1.97E+02	1.44E+02
2. Iodines					
I-131	Ci	4.10E-04	1.50E-03		
I-132	Ci	0.00E+00	2.34E-03		
I-133	Ci	1.75E-03	5.05E-03		
I-134	Ci	0.00E+00	0.00E+00		
I-135	Ci	0.00E+00	0.00E+00		
TOTAL FOR PERIOD	Ci	2.16E-03	8.89E-03		
3. Particulates (> 8 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	4.38E-05		
Fe-59	Ci	0.00E+00	0.00E+00		
Co-60	Ci	2.03E-05	2.70E-05		
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		

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT # 1
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TABLE 3.7-1 GASEOUS EFFLUENTS - GROUND LEVEL RELEASES (CONTINUED)

Nuclides Released	Unit	Continuous Mode QTR#3	QTR#4
3. Particulates (> 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-110	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	9.76E-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 PERIOD	Ci	2.03E-05	8.05E-05
4. Particulates (< 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 PERIOD	Ci	0.00E+00	0.00E+00

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT # 2
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TABLE 3.7-2 GASEOUS EFFLUENTS - GROUND LEVEL RELEASES

Nuclides Released	Unit	Continuous Mode QTR#3	Continuous Mode QTR#4	Batch Mode QTR#3	Batch Mode QTR#4
1. Fission Gases					
AR-41	Ci	0.00E+00	0.00E+00	2.53E-01	2.49E-01
KR-85M	Ci	0.00E+00	0.00E+00	2.00E-02	2.83E-02
KR-85	Ci	0.00E+00	0.00E+00	8.62E-01	1.86E+00
KR-87	Ci	0.00E+00	0.00E+00	2.05E-04	0.00E+00
KR-88	Ci	0.00E+00	0.00E+00	9.98E-03	4.26E-03
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	4.53E-01	1.12E+00
XE-133M	Ci	0.00E+00	0.00E+00	2.95E-01	8.04E-01
XE-133	Ci	1.05E+02	5.56E+01	2.91E+01	8.20E+01
XE-135M	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
XE-135	Ci	7.22E+00	4.52E+00	4.43E-01	3.61E-01
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 PERIOD	Ci	1.12E+02	6.02E+01	3.14E+01	8.65E+01
2. Iodines					
I-131	Ci	9.28E-04	3.69E-04		
I-132	Ci	0.00E+00	0.00E+00		
I-133	Ci	3.35E-03	1.28E-03		
I-134	Ci	0.00E+00	0.00E+00		
I-135	Ci	0.00E+00	0.00E+00		
TOTAL FOR PERIOD	Ci	4.28E-03	1.65E-03		
3. Particulates (> 8 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		
Co-60	Ci	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		

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNIT # 2
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TABLE 3.7-2 GASEOUS EFFLUENTS - GROUND LEVEL RELEASES (CONTINUED)

Nuclides Released	Unit	Continuous Mode QTR#3	QTR#4
3. Particulates (> 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-110	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	0.00E+00
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 PERIOD	Ci	0.00E+00	0.00E+00
4. Particulates (< 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 PERIOD	Ci	0.00E+00	0.00E+00

FLORIDA POWER AND LIGHT COMPANY

ST. LUCIE PLANT UNIT # 1

TABLE 3.8-1

GASEOUS EFFLUENTS - DOSE SUMMATION

AGE GROUP: INFANT

EXPOSURE INTERVAL: JANUARY 1, 1991 THROUGH DECEMBER 31, 1991

NOTE: The below dose results were calculated using actual meterological data during the specified time interval with Met data reduced as per Reg. Guide 1.111, March 1976.

PATHWAY	BONE mrem	LIVER mrem	THYROID mrem	KIDNEY mrem
GROUND PLANE (A)				
COW -MILK (B)	1.47E-04	3.63E-04	5.16E-02	1.23E-04
INHALATION (A)	4.67E-06	2.97E-04	1.94E-03	1.28E-04
TOTAL	1.52E-04	6.59E-04	5.35E-02	2.51E-04

PATHWAY	LUNG mrem	GI-LLI mrem	T. BODY mrem
GROUND PLANE (A)			2.86E-04
COW -MILK (B)	1.88E-04	1.94E-04	2.80E-04
INHALATION (A)	3.07E-04	2.91E-04	2.93E-04
TOTAL	4.95E-04	4.85E-04	8.59E-04

(A) SECTOR: SE RANGE: 1.5
(B) SECTOR: WEST RANGE: 4.25

NOBLE GASES	CALENDER YEAR (mrad)
GAMMA AIR DOSE	3.66E-02
BETA AIR DOSE	6.57E-02

SECTOR: SE RANGE: 1.5 MILES

FLORIDA POWER AND LIGHT COMPANY

ST. LUCIE PLANT UNIT # 2

TABLE 3.8-1

GASEOUS EFFLUENTS - DOSE SUMMATION

AGE GROUP: INFANT

EXPOSURE INTERVAL: JANUARY 1, 1991 THROUGH DECEMBER 31, 1991

NOTE: The below dose results were calculated using actual meterological data during the specified time interval with Met data reduced as per Reg. Guide 1.111, March 1976.

PATHWAY	BONE mrem	LIVER mrem	THYROID mrem	KIDNEY mrem
GROUND PLANE (A)				
COW -MILK (B)	2.65E-04	7.78E-04	1.02E-01	2.80E-04
INHALATION (A)	9.92E-06	7.26E-04	4.31E-03	3.15E-04
TOTAL	2.75E-04	1.50E-03	1.06E-01	5.95E-04

PATHWAY	LUNG mrem	GI-LLI mrem	T. BODY mrem
GROUND PLANE (A)			1.30E-05
COW -MILK (B)	4.57E-04	4.72E-04	6.38E-04
INHALATION (A)	7.13E-04	7.14E-04	7.18E-04
TOTAL	1.17E-03	1.19E-03	1.37E-03

(A) SECTOR: SE RANGE: 1.5
(B) SECTOR: WEST RANGE: 4.25

NOBLE GASES	CALENDER YEAR (mrad)
GAMMA AIR DOSE	5.35E-03
BETA AIR DOSE	1.36E-02

SECTOR: SE RANGE: 1.5 MILES

FLORIDA POWER AND LIGHT COMPANY
ST. LUCIE PLANT
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UNITS 1 AND 2, TABLE 3.9

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

1. Type of Waste	Unit	6 Mo. Period	Error %
a. Spent Resin, Process Filters	M3	3.293 E+1	
	Ci	7.067 E+2	2.0 E+1
b. Dry Compressible Waste (Note 5)	M3	2.365 E+1	
	Ci	5.621 E-1	2.0 E+1
c. Irradiated Components	M3	0	
	Ci	0	
d. Other			
1. Non-Compressible Metal (DAW) (Note 6)	M3	2.501 E+0	
	Ci	2.244 E-2	2.0 E+1

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

Category	Nuclides	%
a.	Cs 137	3.90 E+1
	Cs 134	3.67 E+1
	Co 60	1.02 E+1
	Fe 55	5.20 E+0
	Ni 63	2.87 E+0
	Co 58	2.03 E+0
	Be 7	1.50 E+0
	Mn 54	6.90 E-1
b.	Cs 137	3.31 E+1
	Fe 55	2.46 E+1
	Co 60	1.99 E+1
	Cs 134	8.28 E+0
	Co 58	4.81 E+0
	H 3	2.37 E+0
	Ni 63	2.26 E+0
	Sb 125	1.59 E+0
c.	N/A	N/A

d.	Fe	55	3.83 E+1
	Co	60	2.87 E+1
	Co	58	1.06 E+1
	I	131	4.92 E+0
	H	3	3.91 E+0
	Cs	137	3.23 E+0
	Ni	63	3.20 E+0
	Mn	54	2.33 E+0
	Nb	95	1.92 E+0
	Sn	113	1.51 E+0

3. Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
5	Sole Use Truck	Barnwell, S. C.
7	Sole Use Truck	S.E.G. Oak Ridge, Tenn.

B. Irradiated Fuel Shipments

Number of Shipments	Mode of Transportation	Destination
0	N/A	N/A

N/A = Not Applicable

/jat

SEMI-ANNUAL REPORT
JULY 1, 1991 THROUGH DEC. 31, 1991
UNITS 1 AND 2, TABLE 3.9 (CONTINUED)

Waste Class	Total Volume Cubic Ft.	Total Curies (Note 1)	Principal Radionuclides (Notes 1 & 2)	Type of Waste (Note 3)	Category Reg-Guide 1.21	Type of Container (Note 4)	Solidification Agent
Class A	835.30	5.621 E-1	N/A	PWR Compactible Trash (Note 5)	1.b.	Non-specification Strong Tight Package	None
Class A	88.31	2.444 E-2	N/A	PWR Non-Compactible Trash (Note 6)	1.d.	Non-specification Strong Tight Package	None
Class A	390.30	3.793 E-4	N/A	PWR Ion-Exchange Resin (Note 5)	1.a.	Non-specification Strong Tight Package	None
Class A	411.60	4.363	CS137, Sr90	PWR Ion-Exchange Resin	1.a.	NRC Certified LSA Type A	None
Class C	120.30	103.647	C14, Pu241, TRU, C060, Ni63, Sr90, CS137, Sum of Nuclides $T_{1/2}$ < 5 yr.	PWR Ion-Exchange Resin	1.a.	NRC Certified LSA Type A	None
Class C	120.30	33.913	C14, Pu241, TRU, C060, Ni63, Sr90, CS137, Sum of Nuclides $T_{1/2}$ < 5 yr.	PWR Process Filters	1.a.	NRC Certified Type B	None
Class C	120.30	564.772	C14, C060, Ni63, Sr90, CS137, Sum of Nuclides $T_{1/2}$ < 5 yr.	PWR Ion-Exchange Resin	1.a.	NRC Certified Type B	None

Note 1: The total curie quantity and radionuclide composition of solid waste shipped from the St. Lucie Plant, Units 1 and 2 are determined using a combination of qualitative and quantitative techniques. In general, the St. Lucie Plant follows the guidelines outlined in the Low Level Waste Licensing Branch Technical Position (BTP) on Radioactive Waste Classification (5/11/83) for these determinations.

The most frequently used techniques for determining the total curie quantity in a package are the dose to curie methods and the (concentration) x (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 curie quantity 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 radionculides. 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 3H; 14C, 99TC, 129I, TRU, 241Pu, 242Cm, 63Ni, 55Fe, and 90Sr.

Note 2: "Principal Radionuclides" refer to those radionuclides contained in the waste in concentrations greater than .01 times the concentration of the nuclides listed in Table 1 or .01 times the smallest concentration of the nuclides listed in Table 2 of 10 CFR 61.

Note 3: "Type of Waste" is generally specified as described in NUREG 0782, Draft Environment 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 to date has been sent to the Barnwell, South Carolina burial facility. This material was shipped to a contracted vendor for volume reduction prior to final disposal at the Barnwell, South Carolina burial facility. During the reporting period, seven shipments of Dry Compressible Waste (3,680 cubic feet, 9.46E-1 curies), dewatered secondary resin (904.4 cubic feet, 1.09 E-2 curies), sewage treatment plant solids (828 cubic feet, 4.48 E-2 curies), and waste oil (4757 gallons, 6.78 E-8 curies) were made from the St. Lucie Plant to the volume reduction facility. This material was shipped via "Sole Use Truck" in non-specification strong tight packages.

Note 6: The volume and activity listed for non-compressible metal represent the quantity of material that during the reporting period could not be recycled by the contracted vendor and required disposal at the Barnwell, South Carolina burial facility. During the reporting period, no shipments of non-compressible metal waste was made from the St. Lucie Plant to the volume reduction facility.

ATTACHMENT - A

UNPLANNED GASEOUS EFFLUENT RELEASE
of February 5 & 6, 1991

1) Description and analysis of event

2) Hourly average site meteorological data for February 5 and February 6, 1991.

Attachment A

1) Description and analysis of event

Gas Decay Tank 2C (GDT 2C) was aligned to the Plant Vent for a scheduled batch release under the Control of Operating Procedure No. 2-0530021, Rev. 15 as Gas Release Permit No. 2-91-18 at a starting pressure of 165 psig. The Senior Nuclear Plant Operator (SNPO) made the alignment as per the procedure. Upon rechecking the progress of the release he noted that Gas Decay Tank 2B had decreased in pressure from 159 psig to 73 psig as GDT 2C was being released. The SNPO terminated the release and rechecked the valve line up which would have included checking shut valves in shut direction. Subsequent to the above event, GDT 2A was released and GDT 2B did not reduce in pressure during this release, indicating the most probable cause was a valve outlet from GDT 2B (to the release header) was not fully seated during the release of GDT 2C (Permit 2-91-18), but was fully seated during the SNPO's recheck of the valve lineup.

a) The normal practice is to check the non-releasing GDT's for pressure drop when a release is initiated. Since the starting tank (2C) was 6 psig higher than GDT 2B, the 2B tank did not appear to change at the time 2C started it's release. When the two tanks equalized in pressure, both started to release to the plant vent.

b) The release path was administratively controlled in that the release rate was throttled to maintain less than the prescribed rate on the permit for 2C and the path was set to automatically trip if the concentration in the path exceeded 20 uCi/cc (28.5% of the Site Limit) as measured by the Gas Release Effluent Monitor and it's set points as per the permit controlling the 2C release. In addition, the Monitor was Source Checked prior to the release as per procedure for each release. The release path is also monitored by the Plant Vent Gas Monitor where the setpoints would alarm prior to exceeding the Site Limit for Gaseous Releases. In this sense the additional release from GDT 2B was not uncontrolled due to the administrative and physical controls used for this release path.

c) The Chemistry Radioassay of GDT 2B indicated an activity level 3.8 times higher than the permitted GDT 2C, but only 0.05 percent of the Administrative Limit allowed for this pathway. Both tanks together only achieved 0.06 percent of the Administrative Limit (28.5% of the site limit).

d) The SNPO was instructed on the importance of verifying LOCKED CLOSED Valves fully closed on these tanks.

e) Given the normal (and maximum historical) activity levels of these tanks and the Procedural and Administrative Conservative Setpoints involved with this release path, an Administrative Release Activity Limit or a Site Limit was not exceeded.

f) The Gaseous Release Procedures for both Units were revised to verify that the outlet valves for the two Gas Decay Tanks not being released are verified closed.

FLORIDA POWER & LIGHT COMPANY

ST. LUCIE METEOROLOGICAL DATA

FEB 5, 1991

HOUR ENDING E.S.T.	WIND DRCTN. & SPEED 60-METER DEG	MPH	10-METER DEG	MPH	TEMPERATURE SYS	TEMP DEG. F	DELTA-T SYS	DEG. C/100M	CAT	SIGMA THETA DEG	CAT	RAIN IN.
1	93	15.7	86	8.7	A	70.3	A	-0.3	E	10.0	D	0.00
2	83	16.9	76	8.7	A	70.4	A	-0.2	E	10.4	D	0.00
3	89	17.0	82	8.9	A	70.4	A	-0.2	E	11.6	D	0.00
4	89	15.2	83	8.2	A	70.5	A	-0.3	E	11.8	D	0.00
5	87	15.0	80	8.1	A	70.5	A	-0.3	E	12.3	D	0.00
6	91	12.6	84	6.9	A	70.3	A	-0.3	E	12.0	D	0.00
7	85	12.1	78	6.4	A	70.2	A	-0.2	E	12.5	D	0.00
8	92	12.5	83	6.7	A	70.6	A	-0.3	E	12.8	C	0.00
9	95	12.5	88	7.4	A	71.7	A	-0.7	D	10.1	D	0.00
10	96	MISG	85	MISG	A	72.8	A	-1.2	D	11.7	D	0.00
11	96	MISG	89	MISG	A	72.9	A	-1.2	D	9.8	D	0.00
12	97	MISG	92	MISG	A	73.7	A	-1.7	B	8.5	D	0.00
13	97	MISG	90	MISG	A	73.1	A	-1.5	C	9.5	D	0.00
14	100	MISG	95	MISG	A	73.3	A	-2.0	A	7.5	D	0.00
15	101	MISG	95	MISG	A	73.2	A	-2.0	A	7.5	D	0.00
16	95	MISG	91	MISG	A	72.6	A	-1.6	C	8.7	D	0.00
17	99	15.8	92	9.9	A	72.0	A	-1.2	D	7.5	E	0.00
18	106	14.0	99	8.4	A	71.6	A	-0.9	D	10.1	D	0.00
19	107	14.2	100	8.1	A	71.1	A	-0.4	E	9.8	D	0.00
20	106	14.3	98	8.3	A	71.0	A	-0.4	E	11.1	D	0.00
21	110	14.9	102	8.5	A	70.9	A	-0.4	E	10.3	D	0.00
22	116	15.0	109	8.6	A	70.7	A	-0.3	E	10.0	D	0.00
23	116	13.7	109	7.6	A	70.6	A	-0.3	E	11.8	D	0.00
24	115	14.1	107	7.9	A	70.6	A	-0.4	E	12.3	D	0.00

SUMMARY OF DAY

MAXIMUM:	17.0	9.9	73.7	TOTAL: 0.00
MEAN :	14.4	8.1	71.5	
MINIMUM:	12.1	6.4	70.2	

FLORIDA POWER & LIGHT COMPANY

ST. LUCIE METEOROLOGICAL DATA FEB 6, 1991

HOUR ENDING E.S.T.	WIND DRCTN. & SPEED 60-METER DEG	MPH	10-METER DEG	MPH	TEMPERATURE SYS	TEMP DEG. F	DELTA-T SYS	DEG. C/100M	CAT	SIGMA THETA DEG	CAT	RAIN IN.
1	114	11.8	107	6.9	A	70.5	A	-0.3	E	9.8	D	0.00
2	129	11.4	121	6.1	A	70.2	A	-0.2	E	9.4	D	0.00
3	121	12.4	114	7.0	A	70.2	A	-0.2	E	10.5	D	0.00
4	120	12.5	112	7.0	A	70.0	A	-0.2	E	10.1	D	0.00
5	121	10.6	113	6.0	A	69.9	A	-0.2	E	11.8	D	0.00
6	120	8.5	112	4.6	A	69.8	A	-0.0	E	13.2	C	0.00
7	124	7.5	119	3.8	A	69.5	A	0.3	E	10.8	D	0.00
8	177	5.1	223	2.7	A	66.8	A	1.8	F	N/A	-	0.00
9	173	4.0	222	1.9	A	68.0	A	1.1	E	N/A	-	0.00
10	MISG	7.7	MISG	5.4	A	71.9	A	-1.1	D	MISG	-	0.00
11	MISG	7.7	MISG	6.0	A	73.4	A	-1.9	A	MISG	-	0.00
12	MISG	7.5	MISG	5.8	A	73.5	A	-1.7	C	MISG	-	0.00
13	MISG	7.3	MISG	6.2	A	73.9	A	-1.8	B	MISG	-	0.00
14	MISG	6.5	MISG	5.4	A	73.4	A	-1.7	C	58.2	A	0.00
15	111	7.0	98	6.2	A	73.2	A	-1.6	C	11.6	D	0.00
16	111	7.9	104	6.3	A	73.1	A	-1.6	C	11.6	D	0.00
17	109	8.1	98	6.1	A	72.6	A	-1.4	D	10.9	D	0.00
18	108	8.4	98	5.3	A	71.8	A	-1.0	D	11.0	D	0.00
19	109	8.7	105	4.9	A	71.0	A	-0.4	E	11.5	D	0.00
20	108	6.7	105	3.2	A	70.6	A	-0.0	E	N/A	-	0.00
21	111	6.1	106	3.2	A	70.6	A	0.0	E	N/A	-	0.00
22	103	8.5	98	4.8	A	70.7	A	0.0	E	10.4	D	0.00
23	109	8.8	105	5.0	A	71.0	A	-0.1	E	10.9	D	0.00
24	110	9.0	104	5.1	A	71.1	A	-0.1	E	13.6	C	0.00

SUMMARY OF DAY

MAXIMUM:	12.5	7.0	73.9	TOTAL: 0.00
MEAN :	8.3	5.2	71.1	
MINIMUM:	4.0	1.9	66.8	