#### **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, 2005 THROUGH DECEMBER 31, 2005

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Summation of all Releases Summation of all Releases Nuclide Summation by Quarter Nuclide Summation by Quarter

Liquid Effluent Dose

Liquid Effluent Dose

GASEOUS EFFLUENT:

Unit # 1
Unit # 2
Unit # 1
Unit # 2
Unit # 1
Unit # 2



21 23

25

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Summation of all Releases

Summation of all Releases Nuclide Summation by Quarter Nuclide Summation by Quarter Gas Effluent Dose Gas Effluent Dose

Unit # 1	••
Unit # 2	••
Unit # 1	
Unit # 2	••
Unit#1	••
Unit # 2	••

SOLID WASTE DISPOSAL - TABLE 3.9 Shipment Summations.....

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Attachment - A Unit 1 Liquid Rad Waste Monitor Out of Service Greater Than 30 Days

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Attachment - C C-200, ODCM Revision 25 Marked Up Pages

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

#### 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  $\leq 10$  mrads for gamma radiation and  $\leq 20$  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 halflives > 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.</li>
- \* 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.

	LIC	LIQUID		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

#### 4.1 Estimate of Errors

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 (Cont.)

#### 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 Tank	Monthly Composite	Tritium Gross Alpha	L.S. AIC
Releases	Quarterly Composite	Sr-39, Sr-90, & Fe-55	C.S.
Continuous 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	AIC
		Sr-89, Sr-90, & Fe-55 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

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4. Measurements and Approximations of Total Radioactivity (Continued)

#### 4.2 Methods of Analyses (Continued)

#### **TABLE 3.2**

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.
<u> </u>	4/M	Principal Gamma Emitters Tritium	p.h.a. L.S.
Plant Vent	Monthly Composite Quarterly	Particulate Gross Alpha Particulate	AIC
	Composite	Sr-89 & Sr-90	C.S.

#### RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS

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 botch releases	26		
1. Number of batch releases		30	
2. Total time period for batch releases	26,505	26,505	minutes
3. Maximum time period for a batch release	6,860	6,860	minutes
4. Average time period for a batch release	747	747	minutes
5. Minimum time period for a batch release	385	385	minutes
6. Average dilution stream flow during the			
period	889,400	889,400	gpm

All liquid releases are summarized in Tables

B. Gaseous	Unit 1	Unit 2	Eng. Unit
1. Number of batch releases	14	100	
2. Total time period for batch releases	3,884	19,970	minutes
3. Maximum time period for a batch release	682	5,835	minutes
4. Average time period for a batch release	277	200	minutes
5. Minimum time period for a batch release	28	7	minutes
All gaseous waste releases are			

summarized in Tables

#### 6. Unplanned Releases

A. Lic	quid	Unit 1	Unit 2	Eng. Unit
1. Nu	umber of releases	0	0	
2. To	otal 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

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 2005.

VISITOR DOSE RESULTS FOR CALENDAR YEAR 2005 were:

	DOSE	Gas Particulate	Dose
NOBLE GAS	<u>mrad</u>	<u>&amp; lodine Dose</u>	mrem
Gamma Air Dose	9.36E-05	Bone	1.99E-05
Beta Air Dose	8.96E-05	Liver	1.38E-03
		Thyroid	1.36E-03
		Kidney	1.37E-03
		Lung	1.36E-03
		GI-LLI	1.36E-03
		Total Body	1.39E-03

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

The ODCM was revised to remove a reference to an effluent radiation which was never installed in the Unit 1 Reactor Auxiliary Building. The effluent monitor was not needed due to a modification of a fan system's discharge path. The modification allowed the fan discharge be directed inside of the building where the plant vent radiation monitor would monitor the fan's discharge. Additionally, the definition of a "channel functional test" was revised to match the definition of "channel functional test" in the Technical Specifications. Several minor revisions which were generally administrative in nature were also incorporated during this revision.

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 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.

## TABLE 3.3-1 LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

A.	Fission and Activation Products	UNIT	QTR#1	QTR#2
	<ol> <li>Total Release - (Not including Tritium, Gases, and Alpha)</li> </ol>	Ci	2.37E-02	1.30E-02
	2. Average Diluted Concentration During Period	uCi/ml	5.94E-11	2.55E-11
B.	Tritium			
	1. Total Release	Ci	2.13E+01	1.94E+01
	2. Average Diluted Concentration During Period	uCi/ml	5.35E-08	3.81E-08
C.	Dissolved and Entrained Gases			
	1. Total Release	Ci	2.90E-03	8.03E-04
	2. Average Diluted Concentration During Period	uCi/ml	7.27E-12	1.58E-12
D.	Gross Alpha Radioactivity			
	1. Total Release	Ci	0.00E+00	0.00E+00
E.	Volume of Waste Released (Prior to Dilution)	Liters	8.25E+05	(a) 2.50E+07
F.	Volume of Dilution Water Used During Period	Liters	3.99E+11	5.09E+11

(a) - This value includes 2.46E+07 Liters from one settling pond release for hurricane preparations.

## 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 Tritium, Gases, and Alpha)	Ci	5.33E-02	5.40E-02
2. Average Diluted Concentration During Period	uCi/ml	1.04E-10	1.55E-10
B. Tritium			
1. Total Release	Ci	6.10E+01	6.65E+01
2. Average Diluted Concentration During Period	uCi/ml	1.19E-07	1.91E-07
C. Dissolved and Entrained Gases			
1. Total Release	Ci	5.93E-03	5.97E-02
2. Average Diluted Concentration During Period	uCi/ml	1.16E-11	1.72E-10
D. Gross Alpha Radioactivity			
1. Total Release	Ci	5.30E-07	0.00E+00
<ul><li>E. Volume of Waste Released</li><li>(Prior to Dilution)</li></ul>	Liters	5.90E+05	(b) 1.73E+07
F. Volume of Dilution Water Used During Period	Liters	5.13E+11	3.48E+11

<sup>(</sup>b) - This value includes 1.62E+07 Liters from one settling pond release for Hurricane preparations.

## TABLE 3.3-2 LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

A.	Fission and Activation Products	UNIT	QTR#1	QTR#2
	<ol> <li>Total Release - (Not including Tritium, Gases, and Alpha)</li> </ol>	Ci	2.37E-02	1.30E-02
	2. Average Diluted Concentration During Period	uCi/ml	5.94E-11	2.55E-11
B.	Tritium			
	1. Total Release	Ci	2.13E+01	1.94E+01
	2. Average Diluted Concentration During Period	uCi/ml	5.35E-08	3.81E-08
C.	Dissolved and Entrained Gases			
	1. Total Release	Ci	2.90E-03	8.03E-04
	2. Average Diluted Concentration During Period	uCi/ml	7.27E-12	1.58E-12
D.	Gross Alpha Radioactivity			
	1. Total Release	Ci	0.00E+00	0.00E+00
E.	Volume of Waste Released (Prior to Dilution)	Liters	8.25E+05	(a) 2.50E+07
F.	Volume of Dilution Water Used During Period	Liters	3.99E+11	5.09E+11

(a) - This value includes 2.46E+07 Liters from one settling pond release for hurricane preparations.

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

A.	Fission and Activation Products	UNIT	QTR#3	QTR#4
	1. Total Release - (Not including Tritium, Gases, and Alpha)	Ci	5.33E-02	5.40E-02
	2. Average Diluted Concentration During Period	uCi/ml	1.04E-10	1.55E-10
B. '	Tritium			
	1. Total Release	Ci	6.10E+01	6.65E+01
	<ol> <li>Average Diluted Concentration During Period</li> </ol>	uCi/ml	1.19E-07	1.91E-07
<b>C</b> . ]	Dissolved and Entrained Gases			
	1. Total Release	Ci	5.93E-03	5.97E-02
	<ol> <li>Average Diluted Concentration During Period</li> </ol>	uCi/ml	1.16E-11	1.72E-10
D. (	Gross Alpha Radioactivity			
	1. Total Release	Ci	5.30E-07	0.00E+00
E. 1	Volume of Waste Released (Prior to Dilution)	Liters	5.90E+05	(b) 1.73E+07
F. <b>\</b>	Volume of Dilution Water Used During Period	Liters	5.13E+11	3.48E+11

(b) - This value includes 1.62E+07 Liters from one settling pond release for Hurricane preparations.

# TABLE 3.4-1 LIQUID EFFLUENTS

NUCLIDES	LIDES Continuous Mode		Batch Mode		
RELEASED	UNIT	QTR#1	QTR#2	QTR#1	QTR#2
C 14	C:	0.0000.000	0.005.00	5 35E 02	0 17E 02
C-14	Ci	0.00E+00	0.00E+00	J.ZJE-03	2.17E-03
INa-24	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CI-51	Ci	0.00E+00	0.00E+00	3.40E-04	0.00E+00
Min-54	Ci Ci	0.00E+00	0.00E+00	8.28E-04	3.47E-04
Fe-55	Ci	0.00E+00	0.00E+00	6.70E-03	3.62E-03
Mn-56	Ci 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	0.00E+00
Co-58	Ci	0.00E+00	0.00E+00	6.32E-03	1.29E-03
Fe-59	Ci	0.00E+00	0.00E+00	3.22E-05	0.00E+00
Co-60	Ci	0.00E+00	0.00E+00	1.50E-03	8.71E-04
Ni-63	Ci	0.00E+00	0.00E+00	1.46E-03	5.70E-04
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	0.00E+00	0.00E+00
Sr-89	Ci	0.00E+00	0.00E+00	3.72E-05	1.34E-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	0.00E+00	0.00E+00
Zr-95	Ci	0.00E+00	0.00E+00	8.01E-05	0.00E+00
Nb-95	Ci	0.00E+00	0.00E+00	1.46E-04	0.00E+00
Zr-97	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-97	Ci	0.00E+00	0.00E+00	0.00E+00	1.26E-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-110	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-113	Ci	0.00E+00	0.00E+00	2.43E-05	3.33E-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	1.55E-04
Sb-125	Ci	0.00E+00	0.00E+00	8.10E-04	3.73E-03

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## TABLE 3.4-1 LIQUID EFFLUENTS (Continued)

NUCLIDES		Continuous M	lode	Batch Mode	
RELEASED	UNIT	QTR#1	QTR#2	QTR#1	QTR#2
To 120	C:	0.000.000	0.005.00		
Te-129	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1e-129m	Ci Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-130		0.00E+00	0.00E+00	0.00E+00	0.00E+00
1-131	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1e-132	Ci Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1-132	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1-133	C1	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	0.00E+00	2.43E-05
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	1.79E-04	1.86E-04
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	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	2.37E-02	1.30E-02
Ar-41	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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	2.67E-05	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	0.00E+00	0.00E+00
Xe-133	Ci	0.00E+00	0.00E+00	2.84E-03	7.65E-04
Xe-135m	Ci	0.00E+00	0.00E+00	2.93E-05	3.78E-06
Xe-135	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	3 46F-05
		0.001.00	5,000,000	0.001100	210L-0J

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# TABLE 3.4-1 LIQUID EFFLUENTS (Continued)

NUCLIDES		Continuous M	lode	Batch Mc	de
RELEASED	UNIT	QTR#3	QTR#4	QTR#3	QTR#4
C-14	Ci	0.00E+00	0.00E+00	3.04E-02	2.36E-02
Na-24	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cr-51	Ci	0.00E+00	0.00E+00	0.00E+00	1.61E-03
Mn-54	Ci	0.00E+00	0.00E+00	2.29E-04	1.46E-04
Fe-55	Ci	0.00E+00	0.00E+00	1.29E-02	1.59E-02
Mn-56	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-57	Ci	0.00E+00	0.00E+00	2.84E-05	3.31E-05
Co-58	Ci	0.00E+00	0.00E+00	2.56E-03	6.49E-03
Fe-59	Ci	0.00E+00	0.00E+00	0.00E+00	2.22E-04
Co-60	Ci	0.00E+00	0.00E+00	2.89E-03	1.95E-03
Ni-63	Ci	0.00E+00	0.00E+00	1.86E-03	2.68E-03
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	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	5.65E-06
Y-90	Ci	0.00E+00	0.00E+00	0.00E+00	5.65E-06
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	1.24E-04
Y-92	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zr-95	Ci	0.00E+00	0.00E+00	1.04E-04	7.23E-05
Nb-95	Ci	0.00E+00	0.00E+00	1.60E-04	1.26E-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	0.00E+00	1.65E-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-110	Ci	0.00E+00	0.00E+00	1.40E-05	0.00E+00
Sn-113	Ci	0.00E+00	0.00E+00	2.68E-06	2.02E-05
Sb-122	Ci	0.00E+00	0.00E+00	0.00E+00	4.89E-06
Sb-124	Ci	0.00E+00	0.00E+00	0.00E+00	3.71E-05
Sb-125	Ci	0.00E+00	0.00E+00	2.08E-03	8.52E-04

# TABLE 3.4-1 LIQUID EFFLUENTS (Continued)

NUCLIDES		Continuous M	lode	Batch Mc	ode
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	3.88E-06
Te-132	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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	7.44E-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	7.40E-06	0.00E+00
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	1.31E-04	9.08E-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	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	5.33E-02	5.40E-02
Ar-41	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-85m	Ci	0.00E+00	0.00E+00	0.00E+00	2.93E-06
Kr-85	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-87	Ci	0.00E+00	0.00E+00	7.61E-06	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	1.39E-03
Xe-133m	Ci	0.00E+00	0.00E+00	0.00E+00	4.21E-04
Xe-133	Ci	0.00E+00	0.00E+00	5.86E-03	5.78E-02
Xe-135m	Ci	0.00E+00	0.00E+00	5.71E-05	2.73E-05
Xe-135	Ci	0.00E+00	0.00E+00	0.00E+00	1.29E-05
Xe-138	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

## TABLE 3.4-2 LIQUID EFFLUENTS

NUCLIDES		Continuous M	lode	Batch Mo	de
RELEASED	UNIT	QTR#1	QTR#2	QTR#1	QTR#2
C-14	Ci	0.00E+00	0.00E+00	5.25E-03	2.17E-03
Na-24	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cr-51	Ci	0.00E+00	0.00E+00	3.40E-04	0.00E+00
Mn-54	Ci	0.00E+00	0.00E+00	8.28E-04	3.47E-04
Fe-55	Ci	0.00E+00	0.00E+00	6.70E-03	3.62E-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	0.00E+00
Co-58	Ci	0.00E+00	0.00E+00	6.32E-03	1.29E-03
Fe-59	Ci	0.00E+00	0.00E+00	3.22E-05	0.00E+00
Co-60	Ci	0.00E+00	0.00E+00	1.50E-03	8.71E-04
Ni-63	Ci	0.00E+00	0.00E+00	1.46E-03	5.70E-04
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	0.00E+00	0.00E+00
Sr-89	Ci	0.00E+00	0.00E+00	3.72E-05	1.34E-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	0.00E+00	0.00E+00
Zr-95	Ci	0.00E+00	0.00E+00	8.01E-05	0.00E+00
Nb-95	Ci	0.00E+00	0.00E+00	1.46E-04	0.00E+00
Zr-97	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-97	Ci	0.00E+00	0.00E+00	0.00E+00	1.26E-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-110	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-113	Ci	0.00E+00	0.00E+00	2.43E-05	3.33E-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	1.55E-04
Sb-125	Ci	0.00E+00	0.00E+00	8.10E-04	3.73E-03

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# TABLE 3.4-2 LIQUID EFFLUENTS (Continued)

NUCLIDES	UCLIDES Continuous Mode		Batch Mo	Batch Mode	
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	0.00E+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	0.00E+00
Te-132	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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	0.00E+00	2.43E-05
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	1.79E-04	1.86E-04
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	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	2.37E-02	1.30E-02
Ar-41	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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	2.67E-05	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	0.00E+00	0.00E+00
Xe-133	Ci	0.00E+00	0.00E+00	2.84E-03	7.65E-04
Xe-135m	Ci	0.00E+00	0.00E+00	2.93E-05	3.78E-06
Xe-135	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	3.46E-05
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# TABLE 3.4-2 LIQUID EFFLUENTS (Continued)

NUCLIDES		Continuous M	lode	Batch Mc	de
RELEASED	UNIT	QTR#3	QTR#4	QTR#3	QTR#4
C-14	Ci	0.00E+00	0.00E+00	3.04E-02	2.36E-02
Na-24	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cr-51	Ci	0.00E+00	0.00E+00	0.00E+00	1.61E-03
Mn-54	Ci	0.00E+00	0.00E+00	2.29E-04	1.46E-04
Fe-55	Ci	0.00E+00	0.00E+00	1.29E-02	1.59E-02
Mn-56	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-57	Ci	0.00E+00	0.00E+00	2.84E-05	3.31E-05
Co-58	Ci	0.00E+00	0.00E+00	2.56E-03	6.49E-03
Fe-59	Ci	0.00E+00	0.00E+00	0.00E+00	2.22E-04
Co-60	Ci	0.00E+00	0.00E+00	2.89E-03	1.95E-03
Ni-63	Ci	0.00E+00	0.00E+00	1.86E-03	2.68E-03
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	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	5.65E-06
Y-90	Ci	0.00E+00	0.00E+00	0.00E+00	5.65E-06
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	1.24E-04
Y-92	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zr-95	Ci	0.00E+00	0.00E+00	1.04 <b>E-0</b> 4	7.23E-05
Nb-95	Ci	0.00E+00	0.00E+00	1.60E-04	1.26E-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	0.00E+00	1.65E-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-110	Ci	0.00E+00	0.00E+00	1.40E-05	0.00E+00
Sn-113	Ci	0.00E+00	0.00E+00	2.68E-06	2.02E-05
Sb-122	Ci	0.00E+00	0.00E+00	0.00E+00	4.89E-06
Sb-124	Ci	0.00E+00	0.00E+00	0.00E+00	3.71E-05
Sb-125	Ci	0.00E+00	0.00E+00	2.08E-03	8.52E-04

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# TABLE 3.4-2 LIQUID EFFLUENTS (Continued)

NUCLIDES		Continuous M	lode	Batch Mo	de
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	3.88E-06
Te-132	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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	7.44E-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	7.40E-06	0.00E+00
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	1.31E-04	9.08E-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	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	5.33E-02	5.40E-02
Ar-41	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-85m	Ci	0.00E+00	0.00E+00	0.00E+00	2.93E-06
Kr-85	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-87	Ci	0.00E+00	0.00E+00	7.61E-06	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	1.39E-03
Xe-133m	Ci	0.00E+00	0.00E+00	0.00E+00	4.21E-04
Xe-133	Ci	0.00E+00	0.00E+00	5.86E-03	5.78E-02
Xe-135m	Ci	0.00E+00	0.00E+00	5.71E-05	2.73E-05
Xe-135	Ci	0.00E+00	0.00E+00	0.00E+00	1.29E-05
Xe-138	Ci	0.00E+00	0.00E+00	0,00E+00	0.00E+00

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# TABLE 3.5-1 LIQUID EFFLUENTS - DOSE SUMMATION

AGE GROUP:	ADULT	LOCATION:	ANY ADULT
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# FISH AND SHELLFISH

ORGAN	DOSE mrem
Bone	2.37E-02
Liver	1.01E-01
Thyroid	4.41E-04
Kidney	4.68E-04
Lung	1.18E-01
GI-LLI	4.63E-02
Total Body	2.72E-02

## TABLE 3.5-2 LIQUID EFFLUENTS - DOSE SUMMATION

AGE GROUP: ADULT LOCATION: ANY ADULT

FISH AND SHELLFISH

OBCAN	DOSE
ORGAN	mrem
Bone	2.37E-02
Liver	1.01E-01
Thyroid	4.41E-04
Kidney	4.68E-04
Lung	1.18E-01
GI-LLI	4.63E-02
Total Body	2.72E-02

# TABLE 3.6-1 GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

A.	Fission and Activation Gases	UNIT	QTR#1	QTR#2
	1. Total Release	Ci	0.00E+00	0.00E+00
	2. Average Release Rate For Period	uCi/sec	0.00E+00	0.00E+00
B.	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.	Particulates			
	<ol> <li>Particulates (Half Life &gt; 8 days)</li> </ol>	Ci	3.11E-06	3.88E-06
	2. Average Release Rate For Period	uCi/sec	3.96E-07	4.93E-07
	3. Gross Alpha Radioactivity	Ci	3.60E-07	1.81E-07
D.	Tritium			
	1. Total Release	Ci	0.00E+00	5.40E+00
	2. Average Release Rate For Period	uCi/sec	0.00E+00	6.87E-01

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

A.	Fission and Activation Gases	UNIT	QTR#3	QTR#4
	1. Total Release	Ci	0.00E+00	3.11E-01
	2. Average Release Rate For Period	uCi/sec	0.00E+00	3.96E-02
B.	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.	Particulates			
	<ol> <li>Particulates (Half Life &gt; 8 days)</li> </ol>	Ci	4.81E-06	1.24E-06
	2. Average Release Rate For Period	uCi/sec	6.12E-07	1.57E-07
	3. Gross Alpha Radioactivity	Ci	2.12E-08	8.48E-08
D.	Tritium			
	1. Total Release	Ci	2.53E+01	1.25E+01
	2. Average Release Rate For Period	uCi/sec	3.22E+00	1.58E+00

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## TABLE 3.6-2 GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

A.	Fission and Activation Gases	UNIT	QTR#1	QTR#2
	1. Total Release	Ci	4.27E-01	6.30E-01
	2. Average Release Rate For Period	uCi/sec	5.43E-02	8.02E-02
B.	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.	Particulates			
	<ol> <li>Particulates (Half Life &gt; 8 days)</li> </ol>	Ci	6.56E-06	3.76E-07
	2. Average Release Rate For Period	uCi/sec	8.34E-07	4.78E-08
	3. Gross Alpha Radioactivity	Ci	6.62E-07	1.27E-07
D.	Tritium			
	1. Total Release	Ci	1.17E+01	1.11E-01
	2. Average Release Rate For Period	uCi/sec	1.49E+00	1.41E-02

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

A.	Fission and Activation Gases	UNIT	QTR#3	QTR#4
	1. Total Release	Ci	8.57E-01	5.75E+00
	2. Average Release Rate For Period	uCi/sec	1.09 <b>E-</b> 01	7.31E-01
B.	Iodines			
	1. Total Iodine-131	Ci	0.00E+00	2.96E-05
	2. Average Release Rate For Period	uCi/sec	0.00E+00	3.76E-06
C.	Particulates			
	<ol> <li>Particulates (Half Life &gt; 8 days)</li> </ol>	Ci	7.38E-06	1.55E-05
	2. Average Release Rate For Period	uCi/sec	9.38E-07	1.98E-06
	3. Gross Alpha Radioactivity	Ci	1.92E-08	1.27E-07
D.	Tritium			
	1. Total Release	Ci	7.06E+00	3.21E-01
	2. Average Release Rate For Period	uCi/sec	8.99E-01	4.08E-02

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#### TABLE 3.7-1 GASEOUS EFFLUENTS - GROUND LEVEL RELEASES

	Nuclides		Continuous Mode		· Batch I	Mode
	Released	Unit	QTR#1	QTR#2	QTR#1	QTR#2
1 Fission	n Gases					
	Ar-41	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	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
	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	0.00E+00	0.00E+00
	Xe-133m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Xe-133	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	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	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 F	Period	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2. lodines	;					
	I-131	Ci	0.00E+00	0.00E+00		
	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 F	eriod	Ci	0.00E+00	0.00E+00		
3. Particu	lates (>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		

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#### TABLE 3.7-1 GASEOUS EFFLUENT'S - GROUND LEVEL RELEASES (Continued)

	Nuolidos	Lloit	Continuous	Mode
	Released	Onit		Q1R#2
2 Dortiou		ave) (conti	auod)	
5. Fallicu		ays) (coniii		0.0012+00
	51-09		0.00ET00 2.76E.07	0.0000000
	SI-90		3.70E-07	0.0000000
	1-90 Du 102		5.70E-07	0.002+00
	Ru-103		0.002+00	0.002+00
	Ag-110		0.00E+00	0.00E+00
	Sn-113		0.002+00	0.00E+00
	SD-124		0.00E+00	0.00E+00
	SD-125		0.00E+00	0.00E+00
	1e-129m		0.00E+00	0.00E+00
	Cs-134		0.00E+00	0.00E+00
	CS-136		0.00E+00	0.00E+00
	US-137	CI	2.36E-06	3.88E-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 P	eriod	Ci	3.11E-06	3.88E-06
4. Particul	lates (< 8 C	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 Pe	eriod	Ci	0.00E+00	0.00E+00

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

	Nuclides		Continuou	s Mode	Batch	Mode
	Released	Unit	QTR#3	QTR#4	QTR#3	QTR#4
1. Fis	sion Gases					
	Ar-41	Ci	0.00E+00	0.00E+00	0.00E+00	1.31E-01
	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
	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	0.00E+00	0.00E+00
	Xe-133m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Xe-133	Ci	0.00E+00	0.00E+00	0.00E+00	1.73E-01
	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	7.34E-03
	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 f	for Period	Ci	0.00E+00	0.00E+00	0.00E+00	3.11E-01
2. lod	ines					
	I-131	Ci	0.00E+00	0.00E+00		
	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 f	or Period	Ci	0.00E+00	0.00E+00		
3. Par	ticulates (> 8 D	ays)				
	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		
	Sr-89	Ci	2.74E-06	3.13E-07		
	Sr-90	Ci	2.66E-07	1.34E-07		

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

			Continuous	s Mode
	Nuclides	Unit	QTR#3	QTR#4
	Released			
3. Particu	lates ( > 8 Da	ays) (contir	nued)	
	Y-90	Ci	2.66E-07	1.34E-07
	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	1.54E-06	6.56E-07
	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 P	eriod	Ci	4.81E-06	1.24E-06
4. Particul	lates (<8D	ays)		
	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 Pe	eriod	Ci	0.00E+00	0.00E+00

#### 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	1.16E-01	2.47E-01
	Kr-85m	Ci	0.00E+00	0.00E+00	1.23E-03	0.00E+00
	Kr-85	Ci	0.00E+00	0.00E+00	0.00E+00	2.71E-02
	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	0.00E+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	0.00E+00	0.00E+00
	Xe-133m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Xe-133	Ci	0.00E+00	0.00E+00	2.51E-01	3.46E-01
	Xe-135m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Xe-135	Ci	0.00E+00	0.00E+00	5.78E-02	1.01E-02
	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	eriod	Ci	0.00E+00	0.00E+00	4.27E-01	6.30E-01
2. lodines						
	I-131	Ci	0.00E+00	0.00E+00		
	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		
	l-135	Ci	0.00E+00	0.00E+00		
Total for P	eriod	Ci	0.00E+00	0.00E+00		
3. Particul	lates (>81	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		

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

	Nuclides		Continuous	Mode
	Released	Unit	QTR#1	QTR#2
3. Particu	lates ( > 8 Da	ays) (conti	nued)	
	Sr-89	Ci	8.39E-07	0.00E+00
	Sr-90	Ci	0.00E+00	1.14E-07
	Y-90	Ci	0.00E+00	1.14E-07
	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	5.72E-06	1.48E-07
	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 P	eriod	Ci	6.56E-06	3.76E-07
4. Particul	ates (< 8 D	ays)		
	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 Pe	eriod	Ci	0.00E+00	0.00E+00

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

	Nuclides		Continuous Mode		Batch Mode	
	Released	Unit	QTR#3	QTR#4	QTR#3	QTR#4
1 Fission	Gases					
1. 1 1551011	Ar-41	Ci	0.00E+00	0.00E+00	2.48E-01	6.64E-01
	Kr-85m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Kr-85	Ci	0.00E+00	0.00E+00	7.49E-02	2.31E+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	0.00E+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	1.28E+00	0.00E+00	1.18E-03
	Xe-133m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Xe-133	Ci	0.00E+00	0.00E+00	5.22E-01	1.47E+00
	Xe-135m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Xe-135	Ci	0.00E+00	0.00E+00	1.21E-02	2.69E-02
	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	eriod	Ci	0.00E+00	1.28E+00	8.57E-01	4.47E+00
2. Iodines						
	I-131	Ci	0.00E+00	0.00E+00		
	I-132	Ci	0.00E+00	0.00E+00		
	I-133	Ci	0.00E+00	2.96E-05		
	I-134	Ci	0.00E+00	0.00E+00		
	I-135	Ci	0.00E+00	0.00E+00		
Total for P	eriod	Ci	0.00E+00	2.96E-05		
3. Particul	ates (>8D	ays)				
	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 ANNUAL REPORT

#### JANUARY 1, 2005 THROUGH DECEMBER 31, 2005

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

			Continuous	s Mode
	Nuclides	Unit	QTR#3	QTR#4
2 Dortiou	Released	) ava) (aantii	auad)	
5. Panicu	ales ( > 0 L	ays) (conui	1 44E-06	1015-05
	Sr 00		1.44E-00	0.00E+00
	SI-90		2.775-07	0.00E+00
	1-90		2.77E-07	0.00E+00
	Ku-105			0.00E+00
	Ay-110			0.00E+00
	OII-110			0.00E+00
	SD-124		0.000000	0.00E+00
	SD-125			0.00E+00
	1e-129m		0.00E+00	0.00E+00
	US-134		0.00E+00	0.00E+00
	CS-130		0.00E+00	0.00E+00
	US-137		5.38E-00	5.49E-06
	Ba-140	CI 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 P	eriod	Ci	7.38E-06	1.55E-05
4. Particul	lates (< 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	Cì	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 Pe	eriod	Ci	0.00E+00	0.00E+00

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# TABLE 3.8-1 GASEOUS EFFLUENTS - DOSE SUMMATION

#### AGE GROUP: ADULT

	Bone	Liver	Thyroid	Kidney
Dose Pathway	mrem	mrem	mrem	_mrem
Inhalation	1.21E-07	1.38E-03	1.38E-03	1.38E-03
Grass-Goat-Milk	4.09E-06	2.01E-04	1.95E-04	1.97E-04
Ground Plane	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Garden	1.64E-07	3.96E-05	3.94E-05	3.95E-05
Meat	1.61E-07	5.28E-05	5.26E-05	5.26E-05
Total Dose	4.54E-06	1.67E-03	1.67E-03	1.67E-03

	Lung	GI-LLI	Total Body
Dose Pathway	mrem	mrem	mrem
Inhalation	1.38E-03	1.38E-03	1.38E-03
Grass-Goat-Milk	1.96E-04	1.95E-04	1.99E-04
Ground Plane	0.00E+00	0.00E+00	2.26E-05
Garden	3.94E-05	3.94E-05	3.95E-05
Meat	5.26E-05	5.26E-05	5.27E-05
Total Dose	1.67E-03	1.67E-03	1.69E-03

Sector :	WSW	Range:	3.43	miles

Noble G	mrad	
Gamma Air Dose		4.09E-05
Beta Air Dose		1.99E-05
Sector: WNW	Range: 0.97	rniles

# TABLE 3.8-2GASEOUS EFFLUENTS - DOSE SUMMATION

# AGE GROUP: ADULT

	Bone	Liver	Thyroid	Kidney
Dose Pathway	mrem	mrem	mrem	mrem
Inhalation	2.46E-07	6.14E-04	6.17E-04	6.14E-04
Grass-Goat-Milk	8.10E-06	9.78E-05	8.78E-05	9.05E-05
Ground Plane	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Garden	3.26E-07	1.80E-05	1.80E-05	1.77E-05
Meat	3.18E-07	2.38E-05	2.34E-05	2.35E-05
Total Dose	8.99E-06	7.54E-04	7.46E-04	7.46E-04

	Lung	GI-LLI	Total Body
Dose Pathway	mrem	mrem	mrem
Inhalation	6.14E-04	6.14E-04	6.14E-04
Grass-Goat-Milk	8.80E-05	8.69E-05	9.40E-05
Ground Plane	0.00E+00	0.00E+00	4.47E-05
Garden	1.76E-05	1.75E-05	1.78E-05
Meat	2.34E-05	2.34E-05	2.37E-05
Total Dose	7.43E-04	7.42E-04	7.95E-04

Sector: WSW	Range: 3.43 miles
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Noble	mrad
Gamma Air Dose	4.19E-04
Beta Air Dose	4.20E-04
Sector: WNW	niles

#### FLORIDA POWER AND LIGHT COMPANY ST. LUCIE PLANT ANNUAL REPORT JANUARY 1, 2005 THROUGH DECEMBER 31, 2005 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,	M3	5.79E+0	2.0 E+1
Process Filters (Note 6)	Ci	2.68E+2	
b. Dry Compressible	M3	2.78E+2	2.0 E+1
Waste (Note 5)	Ci	3.94E+0	
c. Irradiated	M3	0	N/A*
Components	Ci	0	
d. Other	M3 Ci	0 0	N/A*

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

Category	Nuclides	%
a.	Fe 55 Ni 63 Co 60 Cs 137 Cs 134 Mn 54 Co 58 Sb 125 Ce 144	3.09E+1 2.72E+1 1.69E+1 1.16E+1 5.24E+0 3.61E+0 3.05E+0 4.70E-1 4.40E-1
b.	Fe 55 Ni 63 Co 60 Cs 137 Co 58 Cr 51 Nb 95 Mn 54 Cs 134 Zr 95 Sb 125 Ce 144	4.08E+1 1.47E+1 1.46E+1 8.89E+0 7.52E+0 4.00E+0 2.12E+0 2.04E+0 1.74E+0 1.13E+0 9.50E-1 8.10E-1
с.	N/A*	N/A*

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2. Estimate of major nuclide composition (continued)

Category	Nuclide	%
d.	N/A*	N/A*

3. Solid Waste Disposition.

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Number of Shipments	Mode of Transportation	Destination
1	Sole Use Truck	CNS- Barnwell, SC
14	Sole Use Truck	Duratek- Oak Ridge, TN
7	Sole Use Truck	Studsvik- Erwin, TN
41	Sole Use Truck	RACE- Memphis, TN

B. Irradiated Fuel Shipments

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

\*N/A = Not Applicable

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#### FLORIDA POWER AND LIGHT COMPANY ST. LUCIE PLANT ANNUAL REPORT JANUARY 1, 2005 THROUGH DECEMBER 31, 2005 UNITS 1 AND 2, TABLE 3.9 (CONTINUED)

Waste Class	Total Volume Cubic Feet	Total Curies (Note 1)	Principal Radionuclides (Notes 1 and 2)	Type of Waste (Note 3)	Category Reg. Guide 1.21	Type of Container (Note 4)	Solidification Agent
Class A	9832.20	3.94E+0	N/A	PWR Compressible Waste (note 5)	1.b.	Non- Specification Strong Tight Package	None
Class A	2.34	8.97E-2	Ni 63, Cs 137	PWR Ion- Exchange Resin (note 6)	1.a.	NRC Certified Type B	None
Class B	2.02	1.38E+1	C 14, Tc99, I129,Co 60, Ni 63, Cs 137, Sr 90, Nuclides T1/2 < 5yr.	PWR Ion- Exchange Resin (note 6)	1.a.	NRC Certified Type B	None
Class C	132.4	5.88E+1	Pu 241, Co 60, Ni 63, Cs 137, Sr 90, Nuclides T1/2 <5 yrs., TRU	PWR Process Filters	1.a.	NRC Certified Type B	None
Class C	67.70	1.95E+2	C 14, Tc 99, I 129, TRU, Co 60, Ni 63, Cs 137, Sr 90, Nuclides T 1/2 <5 yrs.	PWR Ion- Exchange Resin	1.a.	NRC Certified Type B	None

#### FLORIDA POWER AND LIGHT COMPANY ST. LUCIE PLANT ANNUAL REPORT JANUARY 1, 2005 THROUGH DECEMBER 31, 2005 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 involve, 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, fifty-five (55) shipments of dry active waste, non-compressible waste, and resins (88,916.6 cubic feet, 2.00 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, strong tight 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, seven (7) shipments of bead resin and process filters (590.0 cubic feet, 3.22E+2 curies) were made from the St. Lucie Plant to the contract vendor for volume reduction and disposal.

#### ATTACHMENT A

#### Unit 1 Liquid Release Monitor Out of Service for Greater Than 30 Days

The Liquid Radiation Detector channel RE-6627 was declared out of service on August 20<sup>th</sup>, 2005, due to a failure to the "Loss of Flow" alarm. Several factors contributed to having the monitor out service for a period longer than thirty days:

- 1. Several new flow switches installed in the monitor failed their post maintenance tests. New flow switches had to be ordered which delayed post maintenance testing.
- 2. Coordination to perform post maintenance testing after repairs was delayed due to the fact that it can take up to a week to accumulate the required volume in the waste monitor tanks to perform the post maintenance test.

On October 7<sup>th</sup>, 2005 after several successful post maintenance tests, the monitor was declared back in service.