

**FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT UNITS 1 AND 2
LICENSE NUMBERS DPR-67 & NPF-16**

**COMBINED ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT
FOR THE PERIOD
JANUARY 1, 2009 THROUGH DECEMBER 31, 2009**

L-2010-033

FLORIDA POWER & LIGHT COMPANY
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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 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 unit, to areas at and beyond the SITE BOUNDARY shall be limited to the following:
During any calendar quarter to ≤ 5 mrad for gamma radiation, and
 ≤ 10 mrad for beta radiation and,
During any calendar year to ≤ 10 mrad for gamma radiation and
 ≤ 20 mrad 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 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.

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EFFLUENT AND WASTE DISPOSAL SUPPLEMENTAL INFORMATION (Continued)

- * 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.

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4.1 Estimate of Errors

Error Topic	LIQUID		GASEOUS	
	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.

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EFFLUENT AND WASTE DISPOSAL SUPPLEMENTAL INFORMATION (Continued)

4.2 Methods of Analyses

TABLE 3.1

RADIOACTIVE LIQUID EFFLUENT SAMPLING AND ANALYSIS

Liquid Source	Sampling Frequency	Type of Analysis	Method of Analysis
Monitor Tank Releases	Each Batch	Principal Gamma Emitters	p.h.a.
	Monthly Composite	Tritium	L.S.
		Gross Alpha	AIC
	Quarterly Composite	Sr-89, Sr-90, Fe-55, 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 Gases One Batch/ Month	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

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EFFLUENT AND WASTE DISPOSAL SUPPLEMENTAL INFORMATION (Continued)

4. Measurements and Approximations of Total Radioactivity (Continued)

4.2 Methods of Analyses(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	p.h.a.
		Tritium	L.S.
Plant Vent	4/M	Principal Gamma Emitters Tritium	p.h.a. L.S.
	Monthly Composite	Particulate Gross Alpha	AIC
	Quarterly Composite	Particulate Sr-89 & Sr-90, Fe-55,	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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5. 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 2009.

VISITOR DOSE RESULTS FOR CALENDAR YEAR were:

<u>NOBLE GAS</u>	<u>DOSE</u> <u>mrad</u>	<u>GAS PARTICULATE</u> <u>& IODINE DOSE</u>	<u>DOSE</u> <u>mrem</u>
Gamma Air Dose	2.31E-04	Bone	5.20E-05
Beta Air Dose	1.49E-04	Liver	5.22E-05
		Thyroid	1.15E-04
		Kidney	5.23E-05
		Lung	5.41E-05
		GI-LLI	5.20E-05
		Total Body	5.20E-05

6. Offsite Dose Calculation Manual(ODCM) Revision(s):
C-200, Offsite Dose Calculation Manual was revised one time during 2009. A summary of the revisions are listed below:
Revision 31B - Revision to correct typo on page 227

7. 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.

8. Process Control Program (PCP) Revisions:
There were no changes during the reporting interval.

9. Major Changes to Radioactive Liquid, Gaseous and Solid Waste Treatment Systems:
There were no changes during the reporting interval.

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ABNORMAL RELEASE SUMMARY

On June 25th, 2009, the Unit 2 Control Room was notified of a loss of 18 psig from the 2B Gas Decay Tank (GDT). Operations immediately implemented the off-normal procedure for gas decay tank pressure loss, and initiated a leak search. The continuous oxygen analyzer, O2Y-6601, was removed from service during the leak search and the pressure drop stopped. Work Request 39007771 was generated to troubleshoot and affect repairs to the gas analyzer. No specific component on the gas analyzer was identified as leaking. The gas analyzer was later returned to service, and no further leakage was observed. Therefore, the location of the leak was not identified. Release details are listed in the table section of this report.

Table 1A - Regulatory Guide (2009)
Gaseous Effluents - Summation Of All Releases
Unit: PSL1

Type of Effluent	Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	% Est. Total Error
A. Fission And Activation Gases						
1. Total Release	Curies	0.00E+00	2.66E-01	0.00E+00	1.42E+00	
2. Average Release rate for period	uCi/sec	0.00E+00	3.37E-02	0.00E+00	1.81E-01	
3. Percent of Applicable Limit	%	*	*	*	*	
B. Radioiodines						
1. Total Iodine-131	Curies	0.00E+00	0.00E+00	0.00E+00	7.34E-07	
2. Average Release rate for period	uCi/sec	0.00E+00	0.00E+00	0.00E+00	9.31E-08	
3. Percent of Applicable Limit	%	*	*	*	*	
C. Particulates						
1. Particulates (Half-Lives > 8 Days)	Curies	2.77E-06	7.33E-06	8.26E-06	5.05E-06	
2. Average Release rate for period	uCi/sec	3.51E-07	9.29E-07	1.05E-06	6.404E-07	
3. Percent of Applicable Limit	%	*	*	*	*	
D. Tritium						
1. Total Release	Curies	0.00E+00	0.00E+00	0.00E+00	2.48E+00	
2. Average Release rate for period	uCi/sec	0.00E+00	0.00E+00	0.00E+00	3.15E-01	
3. Percent of Applicable Limit	%	*	*	*	*	
E. Gross Alpha						
1. Total Release	Curies	2.63E-08	9.19E-08	1.11E-07	1.99E-07	
2. Average Release rate for period	uCi/sec	3.34E-09	1.17E-08	1.41E-08	2.52E-08	

* Applicable limits are expressed in terms of dose.

Table 1C*
Annual Radioactive Effluent Release Report (2009)
Gaseous Effluents - Ground Level Releases
Reactor Unit: PSL1

Nuclides Released	Unit	Continuous Mode			
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Fission Gases					
Xe-135m	Curies	0.00E+00	0.00E+00	0.00E+00	1.36E+00
Xe-135	Curies	0.00E+00	2.66E-01	0.00E+00	6.07E-02
Total For Period	Curies	0.00E+00	2.66E-01	0.00E+00	1.42E+00
Iodines					
I-131	Curies	0.00E+00	0.00E+00	0.00E+00	7.34E-07
Total For Period	Curies	0.00E+00	0.00E+00	0.00E+00	7.34E-07
Particulates					
Cr-51	Curies	0.00E+00	0.00E+00	0.00E+00	2.52E-06
Co-60	Curies	0.00E+00	6.32E-06	8.26E-06	2.53E-06
Cs-137	Curies	2.77E-06	1.00E-06	0.00E+00	0.00E+00
Total For Period	Curies	2.77E-06	7.33E-06	8.26E-06	5.05E-06
Tritium					
H-3	Curies	0.00E+00	0.00E+00	0.00E+00	2.48E+00
Gross Alpha					
G-Alpha	Curies	2.63E-08	9.19E-08	1.11E-07	1.99E-07
Total For Period	Curies	2.63E-08	9.19E-08	1.11E-07	1.99E-07

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Table 1C*
Annual Radioactive Effluent Release Report (2009)
Gaseous Effluents - Ground Level Releases
Reactor Unit: PSL1

		Batch Mode			
Nuclides Released	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Fission Gases					
Xe-133	Curies	0.00E+00	0.00E+00	0.00E+00	2.53E-03
Total For Period	Curies	0.00E+00	0.00E+00	0.00E+00	2.53E-03
Iodines					
No Nuclides Found		N/A	N/A	N/A	N/A
Particulates					
No Nuclides Found		N/A	N/A	N/A	N/A
Tritium					
		Batch Mode			
Nuclides Released	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
No Nuclides Found		N/A	N/A	N/A	N/A
Gross Alpha					
No Nuclides Found		N/A	N/A	N/A	N/A

* Zeroes in this table indicate that no radioactivity was present at detectable levels.

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Table 1A - Regulatory Guide (2009)
Gaseous Effluents - Summation Of All Releases
Unit: PSL2

Type of Effluent	Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	% Est. Total Error
A. Fission And Activation Gases						
1. Total Release	Curies	8.67E-01	1.59E+00	2.00E+00	1.32E+00	
2. Average Release rate for period	uCi/sec	1.10E-01	2.01E-01	2.53E-01	1.67E-01	
3. Percent of Applicable Limit	%	*	*	*	*	
B. Radiolodines						
1. Total Iodine-131	Curies	2.85E-05	1.82E-05	9.42E-06	6.78E-06	
2. Average Release rate for period	uCi/sec	3.61E-06	2.30E-06	1.19E-06	8.60E-07	
3. Percent of Applicable Limit	%	*	*	*	*	
C. Particulates						
1. Particulates (Half-Lives > 8 Days)	Curies	0.00E+00	2.38E-06	2.19E-06	1.78E-07	
2. Average Release rate for period	uCi/sec	0.00E+00	3.01E-07	2.77E-07	2.260E-08	
3. Percent of Applicable Limit	%	*	*	*	*	
D. Tritium						
1. Total Release	Curies	1.70E+00	7.50E-01	1.40E+00	3.78E-02	
2. Average Release rate for period	uCi/sec	2.16E-01	9.52E-02	1.78E-01	4.79E-03	
3. Percent of Applicable Limit	%	*	*	*	*	
E. Gross Alpha						
1. Total Release	Curies	9.71E-08	1.10E-07	1.41E-07	1.05E-07	
2. Average Release rate for period	uCi/sec	1.23E-08	1.39E-08	1.79E-08	1.33E-08	

* Applicable limits are expressed in terms of dose.

Table 1C*
Annual Radioactive Effluent Release Report (2009)
Gaseous Effluents - Ground Level Releases
Reactor Unit: PSL2

Nuclides Released	Unit	Continuous Mode			
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Fission Gases					
Ar-41	Curies	5.72E-01	0.00E+00	0.00E+00	0.00E+00
Kr-87	Curies	0.00E+00	0.00E+00	0.00E+00	7.90E-01
Xe-133	Curies	0.00E+00	1.01E+00	0.00E+00	0.00E+00
Xe-135m	Curies	0.00E+00	0.00E+00	2.98E-01	0.00E+00
Total For Period	Curies	5.72E-01	1.01E+00	2.98E-01	7.90E-01
Iodines					
I-131	Curies	2.85E-05	1.82E-05	9.42E-06	6.78E-06
I-133	Curies	4.35E-04	5.92E-05	8.75E-05	9.04E-05
Total For Period	Curies	4.63E-04	7.73E-05	9.69E-05	9.72E-05
Particulates					
Co-58	Curies	0.00E+00	0.00E+00	7.08E-07	0.00E+00
Co-60	Curies	0.00E+00	2.52E-07	0.00E+00	0.00E+00
Cs-137	Curies	0.00E+00	2.12E-06	1.48E-06	1.78E-07
Total For Period	Curies	0.00E+00	2.38E-06	2.19E-06	1.78E-07
Tritium					
H-3	Curies	1.57E+00	5.62E-01	0.00E+00	0.00E+00
Gross Alpha					
G-Alpha	Curies	9.71E-08	1.10E-07	1.41E-07	1.05E-07
Total For Period	Curies	9.71E-08	1.10E-07	1.41E-07	1.05E-07

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Table 1C*
Annual Radioactive Effluent Release Report (2009)
Gaseous Effluents - Ground Level Releases
Reactor Unit: PSL2

Nuclides Released	Unit	Batch Mode			
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Fission Gases					
Ar-41	Curies	2.56E-01	3.43E-01	5.90E-01	2.06E-01
Kr-85m	Curies	8.06E-05	0.00E+00	0.00E+00	5.76E-04
Kr-87	Curies	0.00E+00	0.00E+00	0.00E+00	1.83E-04
Xe-133m	Curies	0.00E+00	0.00E+00	9.88E-04	6.52E-04
Xe-133	Curies	3.82E-02	2.34E-01	1.07E+00	2.89E-01
Xe-135m	Curies	0.00E+00	0.00E+00	5.85E-04	0.00E+00
Xe-135	Curies	9.04E-04	1.33E-03	3.37E-02	2.99E-02
Xe-138	Curies	0.00E+00	3.59E-05	0.00E+00	0.00E+00
Total For Period	Curies	2.95E-01	5.79E-01	1.70E+00	5.26E-01
Iodines					
No Nuclides Found		N/A	N/A	N/A	N/A
Particulates					
No Nuclides Found		N/A	N/A	N/A	N/A
Tritium					
Batch Mode					
Nuclides Released	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
H-3	Curies	1.32E-01	1.89E-01	1.40E+00	3.78E-02
Gross Alpha					
No Nuclides Found		N/A	N/A	N/A	N/A

* Zeroes in this table indicate that no radioactivity was present at detectable levels.

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Table A-1, Gaseous Effluents - Summation of All Releases
Unit: PSL1
Starting: 1-Jan-2009 Ending: 31-Dec-2009

Total Release	Units	1ST Quarter	2ND Quarter	3RD Quarter	4TH Quarter	Total
A. Fission and Activation Gases	Ci	0.00E+00	2.66E-01	0.00E+00	1.42E+00	1.69E+00
B. Iodines/Halogens	Ci	0.00E+00	0.00E+00	0.00E+00	7.34E-07	7.34E-07
C. Particulates	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
D. Tritium	Ci	0.00E+00	0.00E+00	0.00E+00	2.48E+00	2.48E+00
E. Gross Alpha	Ci	2.63E-08	9.19E-08	1.11E-07	1.99E-07	4.28E-07

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Table A-1, Gaseous Effluents - Summation of All Releases

Unit: PSL2

Starting: 1-Jan-2009 Ending: 31-Dec-2009

Total Release	Units	1ST Quarter	2ND Quarter	3RD Quarter	4TH Quarter	Total
A. Fission and Activation Gases	CI	8.67E-01	1.59E+00	2.00E+00	1.32E+00	5.77E+00
B. Iodines/Halogens	CI	4.63E-04	7.73E-05	9.69E-05	9.90E-05	7.37E-04
C. Particulates	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
D. Tritium	CI	1.70E+00	7.50E-01	1.40E+00	3.78E-02	3.89E+00
E. Gross Alpha	CI	9.71E-08	1.10E-07	1.41E-07	1.05E-07	4.53E-07

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Table A-1A, Gaseous Effluents - Ground Level Release - Batch Mode

Unit: PSL1

Starting: 1-Jan-2009 Ending: 31-Dec-2009

Nuclides Released	Units	1ST Quarter	2ND Quarter	3RD Quarter	4TH Quarter	Total
A. Fission and Activation Gases						
Xe-133	CI	0.00E+00	0.00E+00	0.00E+00	2.53E-03	2.53E-03
B. Iodines/Halogens						
No Nuclides Found	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C. Particulates						
No Nuclides Found	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
D. Tritium						
No Nuclides Found	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E. Gross Alpha						
No Nuclides Found	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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If Not Detected, Nuclide is Not Reported. Zeroes in this table indicates that no radioactivity was present at detectable levels.

Table A-1B, Gaseous Effluents - Ground Level Release - Continuous Mode

Unit: PSL1

Starting: 1-Jan-2009 Ending: 31-Dec-2009

Nuclides Released	Units	1ST Quarter	2ND Quarter	3RD Quarter	4TH Quarter	Total
A. Fission and Activation Gases						
Xe-135m	CI	0.00E+00	0.00E+00	0.00E+00	1.36E+00	1.36E+00
Xe-135	CI	0.00E+00	2.66E-01	0.00E+00	6.07E-02	3.26E-01
Total For Period	CI	0.00E+00	2.66E-01	0.00E+00	1.42E+00	1.69E+00
B. Iodines/Halogens						
I-131	CI	0.00E+00	0.00E+00	0.00E+00	7.34E-07	7.34E-07
C. Particulates						
No Nuclides Found	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
D. Tritium						
H-3	CI	0.00E+00	0.00E+00	0.00E+00	2.48E+00	2.48E+00
E. Gross Alpha						
G-Alpha	CI	2.63E-08	9.19E-08	1.11E-07	1.99E-07	4.28E-07

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If Not Detected, Nuclide is Not Reported. Zeroes in this table indicates that no radioactivity was present at detectable levels.

User: Al Locke

Database: [Server]: PLSA37 [Database]: NEOEMSP

Table A-1A, Gaseous Effluents - Ground Level Release - Batch Mode

Unit: PSL2

Starting: 1-Jan-2009 Ending: 31-Dec-2009

Nuclides Released	Units	1ST Quarter	2ND Quarter	3RD Quarter	4TH Quarter	Total
A. Fission and Activation Gases						
Ar-41	Ci	2.56E-01	3.43E-01	5.90E-01	2.06E-01	1.39E+00
Kr-85m	Ci	8.06E-05	0.00E+00	0.00E+00	5.76E-04	6.57E-04
Kr-87	Ci	0.00E+00	0.00E+00	0.00E+00	1.83E-04	1.83E-04
Xe-133m	Ci	0.00E+00	0.00E+00	9.88E-04	6.52E-04	1.64E-03
Xe-133	Ci	3.82E-02	2.34E-01	1.07E+00	2.89E-01	1.64E+00
Xe-135m	Ci	0.00E+00	0.00E+00	5.85E-04	0.00E+00	5.85E-04
Xe-135	Ci	9.04E-04	1.33E-03	3.37E-02	2.99E-02	6.58E-02
Xe-138	Ci	0.00E+00	3.59E-05	0.00E+00	0.00E+00	3.59E-05
Total For Period	Ci	2.95E-01	5.79E-01	1.70E+00	5.26E-01	3.10E+00
B. Iodines/Halogens						
No Nuclides Found	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C. Particulates						
No Nuclides Found	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
D. Tritium						
H-3	Ci	1.32E-01	1.89E-01	1.40E+00	3.78E-02	1.76E+00
E. Gross Alpha						
No Nuclides Found	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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If Not Detected, Nuclide is Not Reported. Zeroes in this table indicates that no radioactivity was present at detectable levels.

User: Al Locke

Database: [Server]: PSLSA37 [Database]: NEOEMSP

Table A-1B, Gaseous Effluents - Ground Level Release - Continuous Mode

Unit: PSL2

Starting: 1-Jan-2009 Ending: 31-Dec-2009

Nuclides Released	Units	1ST Quarter	2ND Quarter	3RD Quarter	4TH Quarter	Total
A. Fission and Activation Gases						
Ar-41	Ci	5.72E-01	0.00E+00	0.00E+00	0.00E+00	5.72E-01
Kr-87	Ci	0.00E+00	0.00E+00	0.00E+00	7.90E-01	7.90E-01
Xe-133	Ci	0.00E+00	1.01E+00	0.00E+00	0.00E+00	1.01E+00
Xe-135m	Ci	0.00E+00	0.00E+00	2.98E-01	0.00E+00	2.98E-01
Total For Period	Ci	5.72E-01	1.01E+00	2.98E-01	7.90E-01	2.67E+00
B. Iodines/Halogens						
I-129	Ci	0.00E+00	0.00E+00	0.00E+00	1.84E-06	1.84E-06
I-131	Ci	2.85E-05	1.82E-05	9.42E-06	6.78E-06	6.28E-05
I-133	Ci	4.35E-04	5.92E-05	8.75E-05	9.04E-05	6.72E-04
Total For Period	Ci	4.63E-04	7.73E-05	9.69E-05	9.90E-05	7.37E-04
C. Particulates						
No Nuclides Found	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
D. Tritium						
H-3	Ci	1.57E+00	5.62E-01	0.00E+00	0.00E+00	2.13E+00
E. Gross Alpha						
G-Alpha	Ci	9.71E-08	1.10E-07	1.41E-07	1.05E-07	4.53E-07

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If Not Detected, Nuclide is Not Reported. Zeroes in this table indicates that no radioactivity was present at detectable levels.

User: Al Locke

Database: [Server]: PLSA37 [Database]: NEOEMSP

Table 2A - Regulatory Guide 1.21 (2009)
Liquid Effluents - Summation Of All Releases
Unit: PSL1

Type of Effluent	Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	% Est. Total Error
A. Fission And Activation Products						
1. Total Release (not including tritium, gases, alpha)	Curies	2.57E-02	2.33E-02	5.30E-03	1.26E-02	
2. Average diluted concentration during period	uCi/ml	2.37E-09	9.30E-10	3.55E-10	8.48E-10	
3. Percent of Applicable Limit	%	*	*	*	*	
B. Tritium						
1. Total Release	Curies	4.84E+01	3.88E+01	2.19E+01	7.07E+01	
2. Average diluted Concentration during period	uCi/ml	4.46E-06	1.55E-06	1.47E-06	4.75E-06	
3. Percent of Applicable Limit	%	*	*	*	*	
C. Dissolved and Entrained Gases						
1. Total Release	Curies	1.71E-03	1.34E-02	8.75E-06	1.47E-03	
2. Average diluted Concentration during period	uCi/ml	1.58E-10	5.35E-10	5.87E-13	9.88E-11	
3. Percent of Applicable Limit	%	*	*	*	*	
D: Gross Alpha Radioactivity						
1. Total Release		0.00E+00	0.00E+00	0.00E+00	0.00E+00	
E: Waste Vol Release (Pre-Dilution)						
	Liters	4.23E+05	8.49E+06	5.74E+05	6.22E+05	
F. Volume of Dilution Water Used						
	Liters	1.08E+10	2.50E+10	1.49E+10	1.49E+10	

* Applicable limits are expressed in terms of dose.

**Table 2B - Regulatory Guide 1.21 (2009)
Annual Radioactive Effluent Release Report
Liquid Effluents
Reactor Unit: PSL1**

Nuclides Released	Unit	Continuous Mode			
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Fission & Activation Products					
No Nuclides Found		N/A	N/A	N/A	N/A
Tritium					
No Nuclides Found		N/A	N/A	N/A	N/A
Dissolved And Entrained Gases					
No Nuclides Found		N/A	N/A	N/A	N/A

If Not Detected, Nuclide is Not Reported

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**Table 2B - Regulatory Guide 1.21 (2009)
Annual Radioactive Effluent Release Report
Liquid Effluents
Reactor Unit: PSL1**

Nuclides Released	Unit	Batch Mode			
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Fission & Activation Products					
C-14	Curies	2.25E-02	1.66E-02	3.49E-04	6.96E-03
Ni-63	Curies	7.19E-04	8.25E-04	2.38E-04	2.18E-04
Ru-103	Curies	0.00E+00	0.00E+00	0.00E+00	2.36E-06
Co-58	Curies	2.97E-04	1.38E-03	2.35E-03	1.28E-03
Other	Curies	0.00E+00	0.00E+00	0.00E+00	3.54E-04
Sn-113	Curies	0.00E+00	2.37E-06	0.00E+00	0.00E+00
Cs-134	Curies	0.00E+00	0.00E+00	0.00E+00	2.95E-06
Nb-95	Curies	2.21E-05	9.21E-05	1.18E-04	1.86E-04
Ag-110m	Curies	7.86E-05	1.86E-04	3.95E-05	3.50E-04
Fe-55	Curies	7.41E-04	2.61E-03	2.93E-04	1.54E-03
Mn-54	Curies	4.47E-05	3.84E-05	6.06E-05	8.21E-05
Sb-124	Curies	9.71E-05	5.51E-05	6.35E-05	1.23E-05
La-140	Curies	0.00E+00	0.00E+00	3.18E-06	0.00E+00
Te-132	Curies	0.00E+00	1.13E-06	0.00E+00	0.00E+00
I-134	Curies	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-57	Curies	1.67E-06	3.02E-06	0.00E+00	0.00E+00
Cs-137	Curies	8.67E-06	0.00E+00	0.00E+00	4.71E-05
Fe-59	Curies	2.16E-06	4.82E-05	3.61E-05	1.01E-04
Nb-97	Curies	8.81E-06	8.14E-06	4.47E-06	5.57E-05
Sb-125	Curies	6.28E-04	5.82E-04	9.65E-04	3.23E-04
Cr-51	Curies	2.38E-05	3.15E-04	5.01E-04	4.30E-04
Co-60	Curies	4.64E-04	4.95E-04	2.00E-04	3.48E-04
I-131	Curies	0.00E+00	2.31E-06	0.00E+00	0.00E+00
Zr-97	Curies	0.00E+00	2.32E-05	0.00E+00	1.86E-04
Te-129m	Curies	0.00E+00	0.00E+00	0.00E+00	2.92E-05
Zr-95	Curies	1.24E-05	5.04E-05	7.47E-05	1.16E-04
Zn-65	Curies	0.00E+00	5.03E-06	0.00E+00	0.00E+00
Total For Period	Curies	2.57E-02	2.33E-02	5.30E-03	1.26E-02

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Tritium					
H-3	Curies	4.84E+01	3.88E+01	2.19E+01	7.07E+01
Dissolved And Entrained Gases					
Xe-135	Curies	0.00E+00	4.73E-06	0.00E+00	0.00E+00
Xe-133	Curies	1.71E-03	1.33E-02	8.75E-06	1.47E-03
Xe-133m	Curies	0.00E+00	1.22E-04	0.00E+00	0.00E+00
Total For Period	Curies	1.71E-03	1.34E-02	8.75E-06	1.47E-03

If Not Detected, Nuclide is Not Reported

* Zeroes in this table indicate that no radioactivity was present at detectable levels.
See Table 2-7 for typical minimum detectable concentrations.

END OF ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

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Table 2A - Regulatory Guide 1.21 (2009)
Liquid Effluents - Summation Of All Releases
Unit: PSL2

Type of Effluent	Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	% Est. Total Error
A. Fission And Activation Products						
1. Total Release (not including tritium, gases, alpha)	Curies	2.57E-02	2.33E-02	5.30E-03	1.26E-02	
2. Average diluted concentration during period	uCi/ml	2.37E-09	9.30E-10	3.55E-10	8.48E-10	
3. Percent of Applicable Limit	%	*	*	*	*	
B. Tritium						
1. Total Release	Curies	4.84E+01	3.88E+01	2.19E+01	7.07E+01	
2. Average diluted Concentration during period	uCi/ml	4.46E-06	1.55E-06	1.47E-06	4.75E-06	
3. Percent of Applicable Limit	%	*	*	*	*	
C. Dissolved and Entrained Gases						
1. Total Release	Curies	1.71E-03	1.34E-02	8.75E-06	1.47E-03	
2. Average diluted Concentration during period	uCi/ml	1.58E-10	5.35E-10	5.87E-13	9.88E-11	
3. Percent of Applicable Limit	%	*	*	*	*	
D: Gross Alpha Radioactivity						
1. Total Release		0.00E+00	0.00E+00	0.00E+00	0.00E+00	
E: Waste Vol Release (Pre-Dilution)						
	Liters	4.23E+05	8.49E+06	5.74E+05	6.22E+05	
F. Volume of Dilution Water Used						
	Liters	1.08E+10	2.50E+10	1.49E+10	1.49E+10	

* Applicable limits are expressed in terms of dose.

**Table 2B - Regulatory Guide 1.21 (2009)
Annual Radioactive Effluent Release Report
Liquid Effluents
Reactor Unit: PSL2**

Nuclides Released	Unit	Continuous Mode			
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Fission & Activation Products					
No Nuclides Found		N/A	N/A	N/A	N/A
Tritium					
No Nuclides Found		N/A	N/A	N/A	N/A
Dissolved And Entrained Gases					
No Nuclides Found		N/A	N/A	N/A	N/A

If Not Detected, Nuclide is Not Reported

FLORIDA POWER & LIGHT COMPANY
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**Table 2B - Regulatory Guide 1.21 (2009)
Annual Radioactive Effluent Release Report
Liquid Effluents
Reactor Unit: PSL2**

Nuclides Released	Unit	Batch Mode			
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Fission & Activation Products					
Mn-54	Curies	4.47E-05	3.84E-05	6.06E-05	8.21E-05
Ni-63	Curies	7.19E-04	8.25E-04	2.38E-04	2.18E-04
Fe-55	Curies	7.41E-04	2.61E-03	2.93E-04	1.54E-03
Te-129m	Curies	0.00E+00	0.00E+00	0.00E+00	2.92E-05
Co-57	Curies	1.67E-06	3.02E-06	0.00E+00	0.00E+00
Other	Curies	0.00E+00	0.00E+00	0.00E+00	3.54E-04
Ag-110m	Curies	7.86E-05	1.86E-04	3.95E-05	3.50E-04
Sn-113	Curies	0.00E+00	2.37E-06	0.00E+00	0.00E+00
Co-58	Curies	2.97E-04	1.38E-03	2.35E-03	1.28E-03
Cs-137	Curies	8.67E-06	0.00E+00	0.00E+00	4.71E-05
Zr-95	Curies	1.24E-05	5.04E-05	7.47E-05	1.16E-04
Zr-97	Curies	0.00E+00	2.32E-05	0.00E+00	1.86E-04
Sb-124	Curies	9.71E-05	5.51E-05	6.35E-05	1.23E-05
Ru-103	Curies	0.00E+00	0.00E+00	0.00E+00	2.36E-06
Sb-125	Curies	6.28E-04	5.82E-04	9.65E-04	3.23E-04
Cs-134	Curies	0.00E+00	0.00E+00	0.00E+00	2.95E-06
Te-132	Curies	0.00E+00	1.13E-06	0.00E+00	0.00E+00
Zn-65	Curies	0.00E+00	5.03E-06	0.00E+00	0.00E+00
I-134	Curies	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C-14	Curies	2.25E-02	1.66E-02	3.49E-04	6.96E-03
Co-60	Curies	4.64E-04	4.95E-04	2.00E-04	3.48E-04
Nb-95	Curies	2.21E-05	9.21E-05	1.18E-04	1.86E-04
I-131	Curies	0.00E+00	2.31E-06	0.00E+00	0.00E+00
Nb-97	Curies	8.81E-06	8.14E-06	4.47E-06	5.57E-05
La-140	Curies	0.00E+00	0.00E+00	3.18E-06	0.00E+00
Fe-59	Curies	2.16E-06	4.82E-05	3.61E-05	1.01E-04
Cr-51	Curies	2.38E-05	3.15E-04	5.01E-04	4.30E-04
Total For Period	Curies	2.57E-02	2.33E-02	5.30E-03	1.26E-02

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Tritium					
H-3	Curies	4.84E+01	3.88E+01	2.19E+01	7.07E+01
Dissolved And Entrained Gases					
Xe-133m	Curies	0.00E+00	1.22E-04	0.00E+00	0.00E+00
Xe-135	Curies	0.00E+00	4.73E-06	0.00E+00	0.00E+00
Xe-133	Curies	1.71E-03	1.33E-02	8.75E-06	1.47E-03
Total For Period	Curies	1.71E-03	1.34E-02	8.75E-06	1.47E-03

If Not Detected, Nuclide is Not Reported

* Zeroes in this table indicate that no radioactivity was present at detectable levels.
See Table 2-7 for typical minimum detectable concentrations.

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Table A-2, Liquid Effluents - Summation of All Releases

Unit: PSL1

Starting: 1-Jan-2009 Ending: 31-Dec-2009

Total Release	Units	1ST Quarter	2ND Quarter	3RD Quarter	4TH Quarter	Total
A. Fission and Activation Products	Ci	2.57E-02	2.89E-01	5.30E-03	1.44E+00	1.76E+00
B. Tritium	Ci	4.84E+01	3.88E+01	2.19E+01	7.32E+01	1.82E+02
C. Dissolved and Entrained Gases	Ci	1.71E-03	1.34E-02	8.75E-06	1.47E-03	1.66E-02
D. Gross Alpha Activity	Ci	2.63E-08	9.19E-08	1.11E-07	1.99E-07	4.28E-07
E. Primary Liquid Release Volume	Liters	4.23E+05	8.49E+06	5.74E+05	6.22E+05	1.01E+07
F. Secondary Liquid Release Volume	Liters	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
G. Dilution Volume	Liters	1.08E+10	2.50E+10	1.49E+10	1.49E+10	6.57E+10
H. Stream Flow	m ³ /sec	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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Table A-2, Liquid Effluents - Summation of All Releases
Unit: PSL2
Starting: 1-Jan-2009 Ending: 31-Dec-2009

Total Release	Units	1ST Quarter	2ND Quarter	3RD Quarter	4TH Quarter	Total
A. Fission and Activation Products	Ci	8.93E-01	1.61E+00	2.00E+00	1.33E+00	5.83E+00
B. Tritium	Ci	5.01E+01	3.95E+01	2.33E+01	7.07E+01	1.84E+02
C. Dissolved and Entrained Gases	Ci	1.71E-03	1.34E-02	8.75E-06	1.47E-03	1.66E-02
D. Gross Alpha Activity	Ci	9.71E-08	1.10E-07	1.41E-07	1.05E-07	4.53E-07
E. Primary Liquid Release Volume	Liters	4.23E+05	8.49E+06	5.74E+05	6.22E+05	1.01E+07
F. Secondary Liquid Release Volume	Liters	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
G. Dilution Volume	Liters	1.08E+10	2.50E+10	1.49E+10	1.49E+10	6.57E+10
H. Stream Flow	m ³ /sec	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



Tuesday, February 16, 2010 10:20:20AM
 Florida Power & Light
 St. Lucie Power Plant

Table A-2B, Liquid Effluents - Continuous Mode
Unit: PSL1
Starting: 1-Jan-2009 Ending: 31-Dec-2009

Nuclides Released	Units	1ST Quarter	2ND Quarter	3RD Quarter	4TH Quarter	Total
A. Particulates and Iodines						
No Nuclides Found	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B. Dissolved and Entrained Gase						
No Nuclides Found	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C. Tritium						
No Nuclides Found	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
D. Gross Alpha Activity						
No Nuclides Found	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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If Not Detected, Nuclide is Not Reported. Zeroes in this table indicates that no radioactivity was present at detectable levels.

User: Al Locke

Database: [Server]: PLSA37 [Database]: NEOEMSP

Table A-2B, Liquid Effluents - Continuous Mode
Unit: PSL2
Starting: 1-Jan-2009 Ending: 31-Dec-2009

Nuclides Released	Units	1ST Quarter	2ND Quarter	3RD Quarter	4TH Quarter	Total
A. Particulates and Iodines						
No Nuclides Found	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B. Dissolved and Entrained Gase						
No Nuclides Found	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C. Tritium						
No Nuclides Found	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
D. Gross Alpha Activity						
No Nuclides Found	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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If Not Detected, Nuclide is Not Reported. Zeroes in this table indicates that no radioactivity was present at detectable levels.

Table A-4, Dose Assessments, 10 CFR Part 50, Appendix I

Unit: PSL1

Starting: 1-Jan-2009 Ending: 31-Dec-2009

Effluent Type	1ST Quarter	2ND Quarter	3RD Quarter	4TH Quarter	Total	Sector/Distance
Liquid Effluent						
Total Body Dose Limit	1.5 mRem	1.5 mRem	1.5 mRem	1.5 mRem	3.0 mRem	Sector: N
Total Body Dose	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-02	Distance: 0.00 mi
% of Limit	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-01	
Any Organ Dose Limit	5.0 mRem	5.0 mRem	5.0 mRem	5.0 mRem	10.0 mRem	Sector: N
Organ Dose	7.56E-03	3.29E-02	4.19E-03	1.28E-02	5.61E-02	Distance: 0.00 mi
% of Limit	1.51E-01	6.57E-01	8.37E-02	2.55E-01	5.61E-01	
Gaseous Effluent						
Gamma Air Dose Limit	5.0 mRad	5.0 mRad	5.0 mRad	5.0 mRad	10.0 mRad	Sector: NW
Gamma Air Dose	0.00E+00	2.59E-05	0.00E+00	2.38E-04	2.64E-04	Distance: 0.97 mi
% of Limit	0.00E+00	5.18E-04	0.00E+00	4.76E-03	2.64E-03	
Beta Air Dose Limit	10.0 mRad	10.0 mRad	10.0 mRad	10.0 mRad	20.0 mRad	Sector: NW
Beta Air Dose	0.00E+00	3.32E-05	0.00E+00	5.87E-05	9.19E-05	Distance: 0.97 mi
% of Limit	0.00E+00	3.32E-04	0.00E+00	5.87E-04	4.60E-04	
Any Organ Dose Limit	7.5 mRem	7.5 mRem	7.5 mRem	7.5 mRem	15.0 mRem	Sector: NW
Organ Dose	1.49E-04	8.61E-05	4.41E-05	8.84E-04	9.68E-04	Distance: 0.97 mi
% of Limit	1.98E-03	1.15E-03	5.87E-04	1.18E-02	6.45E-03	

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Site/Unit/Discharge Point: Site

Liquid Dose Summary - Note: All Doses in mRem

Receptor	Agegroup	Bone	Liver	Total Body	Thyroid	Kidney	Lung	GI-LI	Skin
Liquid Receptor - Teenager	Teenager	2.937E-02	9.825E-02	3.175E-02	7.067E-03	6.170E-03	1.122E-01	7.744E-02	0.000E+00
Liquid Receptor - Child	Child	1.784E-02	4.880E-02	1.974E-02	8.539E-03	2.674E-03	5.499E-02	3.784E-02	0.000E+00
Liquid Receptor - Adult	Adult	7.288E-06	2.878E-04	3.007E-04	2.649E-04	2.710E-04	5.852E-04	2.580E-03	0.000E+00
Maximum Dose by Organ:		2.937E-02	9.825E-02	3.175E-02	8.539E-03	6.170E-03	1.122E-01	7.744E-02	0.000E+00

Maximum Organ Dose (mRem): 1.122E-01

Maximum Total Body Dose (mRem): 3.175E-02

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Site/Unit/Discharge Point: PSL1

Liquid Dose Summary - Note: All Doses in mRem

Receptor	Agegroup	Bone	Liver	Total Body	Thyroid	Kidney	Lung	GI-Li	Skin
Liquid Receptor - Child	Child	8.919E-03	2.440E-02	9.871E-03	4.270E-03	1.337E-03	2.749E-02	1.892E-02	0.000E+00
Liquid Receptor - Adult	Adult	3.644E-06	1.439E-04	1.503E-04	1.324E-04	1.355E-04	2.926E-04	1.290E-03	0.000E+00
Liquid Receptor - Teenager	Teenager	1.469E-02	4.912E-02	1.587E-02	3.534E-03	3.085E-03	5.609E-02	3.872E-02	0.000E+00
Maximum Dose by Organ:		1.469E-02	4.912E-02	1.587E-02	4.270E-03	3.085E-03	5.609E-02	3.872E-02	0.000E+00

Maximum Organ Dose (mRem): 5.609E-02

Maximum Total Body Dose (mRem): 1.587E-02

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Period: Ann, 2009

Site/Unit/Discharge Point: PSL1

Site Boundary NNG Doserate Summary - Note: All Doses in mRem/yr

Receptor	Agegroup	Bone	Liver	Total Body	Thyroid	Kidney	Lung	GI-Li	Skin
WNW Site Boundary - I	Infant	1.175E-05	1.175E-05	1.175E-05	1.175E-05	1.175E-05	1.175E-05	1.175E-05	0.000E+00
NW Site Boundary - In	Infant	1.531E-04	5.413E-04	4.377E-04	5.490E-04	2.246E-04	4.466E-04	4.315E-04	0.000E+00
Maximum Doserate by Organ:		1.531E-04	5.413E-04	4.377E-04	5.490E-04	2.246E-04	4.466E-04	4.315E-04	0.000E+00

Maximum Organ Doserate (mRem/yr): 5.490E-04

Maximum Total Body Doserate (mRem/yr): 4.377E-04

Site Boundary NG Doserate Summary

Gas Receptor Location	Gamma (mRad/yr)	Beta (mRad/yr)	Total Body (mRem/yr)	Skin (mRem/yr)
WNW Site Boundary	1.289E-04	1.289E-04	1.199E-04	1.809E-04
NW Site Boundary	1.497E-04	1.497E-04	1.392E-04	2.100E-04

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Site/Unit/Discharge Point: PSL1

Maximum Individual NNG Dose Summary - Note: All Doses in mRem

Receptor	Agegroup	Bone	Liver	Total Body	Thyroid	Kidney	Lung	GI-Li	Skin
SE Nearest Res - Adult	Adult	3.552E-05	3.553E-05	3.552E-05	3.565E-05	3.550E-05	3.742E-05	3.557E-05	0.000E+00
SE Nearest Res - Child	Child	3.554E-05	3.554E-05	3.549E-05	3.569E-05	3.549E-05	3.772E-05	3.551E-05	0.000E+00
SE Nearest Res - Infant	Infant	3.553E-05	3.553E-05	3.548E-05	3.568E-05	3.548E-05	3.728E-05	3.549E-05	0.000E+00
SE Nearest Res - Teenager	Teenager	3.553E-05	3.554E-05	3.550E-05	3.567E-05	3.550E-05	3.825E-05	3.556E-05	0.000E+00
SE Visitor - Adult	Adult	1.649E-05	1.650E-05	1.649E-05	1.655E-05	1.648E-05	1.732E-05	1.652E-05	0.000E+00
SSW Near Garden - Adult	Adult	2.751E-06	2.752E-06	2.751E-06	2.760E-06	2.750E-06	2.881E-06	2.755E-06	0.000E+00
SSW Near Garden - Child	Child	2.753E-06	2.753E-06	2.749E-06	2.763E-06	2.749E-06	2.902E-06	2.751E-06	0.000E+00
SSW Near Garden - Teenager	Teenager	2.752E-06	2.753E-06	2.750E-06	2.762E-06	2.750E-06	2.939E-06	2.754E-06	0.000E+00
WSW Near Milk - Adult	Adult	7.667E-06	8.148E-06	7.532E-06	8.286E-06	6.970E-06	6.789E-06	6.409E-06	0.000E+00
WSW Near Milk - Child	Child	1.181E-05	1.164E-05	7.153E-06	1.204E-05	7.011E-06	7.243E-06	6.396E-06	0.000E+00
WSW Near Milk - Infant	Infant	1.776E-05	1.912E-05	7.114E-06	2.001E-05	7.010E-06	8.108E-06	6.394E-06	0.000E+00
WSW Near Milk - Teenager	Teenager	2.314E-06	3.127E-06	1.131E-06	2.929E-06	8.124E-07	7.478E-07	2.466E-07	0.000E+00

Maximum Dose by Organ: 3.554E-05 3.554E-05 3.552E-05 3.569E-05 3.550E-05 3.825E-05 3.557E-05 0.000E+00

Maximum Organ Dose (mRem): 3.825E-05

Maximum Total Body Dose (mRem): 3.552E-05

Maximum Individual NG Dose Summary

Gas Receptor Location	Gamma (mRad)	Beta (mRad)	Total Body (mRem)	Skin (mRem)
SE Nearest Res 1.52 mi 142 deg	1.174E-04	4.090E-05	1.092E-04	1.647E-04
WSW Near Milk 3.43 mi 248 deg	1.581E-05	5.508E-06	1.471E-05	2.218E-05
SSW Near Gard 4.4 mi 207 deg	8.908E-06	3.103E-06	8.287E-06	1.250E-05
SE Visitor	5.084E-05	1.771E-05	4.730E-05	7.133E-05

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Table A-4, Dose Assessments, 10 CFR Part 50, Appendix I
Unit: PSL2
Starting: 1-Jan-2009 Ending: 31-Dec-2009

Effluent Type	1ST Quarter	2ND Quarter	3RD Quarter	4TH Quarter	Total	Sector/Distance
Liquid Effluent						
Total Body Dose Limit	1.5 mRem	1.5 mRem	1.5 mRem	1.5 mRem	3.0 mRem	Sector: N
Total Body Dose	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-02	Distance: 0.00 mi
% of Limit	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-01	
Any Organ Dose Limit	5.0 mRem	5.0 mRem	5.0 mRem	5.0 mRem	10.0 mRem	Sector: N
Organ Dose	7.56E-03	3.29E-02	4.19E-03	1.28E-02	5.61E-02	Distance: 0.00 mi
% of Limit	1.51E-01	6.57E-01	8.37E-02	2.55E-01	5.61E-01	
Gaseous Effluent						
Gamma Air Dose Limit	5.0 mRad	5.0 mRad	5.0 mRad	5.0 mRad	10.0 mRad	Sector: NW
Gamma Air Dose	3.91E-04	1.84E-04	3.52E-04	3.53E-04	1.28E-03	Distance: 0.97 mi
% of Limit	7.83E-03	3.69E-03	7.03E-03	7.05E-03	1.28E-02	
Beta Air Dose Limit	10.0 mRad	10.0 mRad	10.0 mRad	10.0 mRad	20.0 mRad	Sector: NW
Beta Air Dose	1.40E-04	1.24E-04	1.71E-04	4.67E-04	9.01E-04	Distance: 0.97 mi
% of Limit	1.40E-03	1.24E-03	1.71E-03	4.67E-03	4.50E-03	
Any Organ Dose Limit	7.5 mRem	7.5 mRem	7.5 mRem	7.5 mRem	15.0 mRem	Sector: NW
Organ Dose	1.02E-02	5.58E-03	3.38E-03	2.28E-03	2.14E-02	Distance: 0.97 mi
% of Limit	1.36E-01	7.43E-02	4.51E-02	3.04E-02	1.43E-01	

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Site/Unit/Discharge Point: PSL2

Liquid Dose Summary - Note: All Doses in mRem

<u>Receptor</u>	<u>Agegroup</u>	<u>Bone</u>	<u>Liver</u>	<u>Total Body</u>	<u>Thyroid</u>	<u>Kidney</u>	<u>Lung</u>	<u>GI-Li</u>	<u>Skin</u>
Liquid Receptor - Child	Child	8.919E-03	2.440E-02	9.871E-03	4.270E-03	1.337E-03	2.749E-02	1.892E-02	0.000E+00
Liquid Receptor - Adult	Adult	3.644E-06	1.439E-04	1.503E-04	1.324E-04	1.355E-04	2.926E-04	1.290E-03	0.000E+00
Liquid Receptor - Teenager	Teenager	1.469E-02	4.912E-02	1.587E-02	3.534E-03	3.085E-03	5.609E-02	3.872E-02	0.000E+00
Maximum Dose by Organ:		1.469E-02	4.912E-02	1.587E-02	4.270E-03	3.085E-03	5.609E-02	3.872E-02	0.000E+00

Maximum Organ Dose (mRem): 5.609E-02

Maximum Total Body Dose (mRem): 1.587E-02

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Site/Unit/Discharge Point: PSL2

Site Boundary NNG Doserate Summary - Note: All Doses in mRem/yr

Receptor	Agegroup	Bone	Liver	Total Body	Thyroid	Kidney	Lung	GI-Li	Skin
NW Site Boundary - In	Infant	8.305E-05	4.569E-04	3.826E-04	7.464E-03	1.711E-04	3.745E-04	3.678E-04	0.000E+00
WNW Site Boundary - I	Infant	8.828E-07	8.828E-07	8.828E-07	8.828E-07	8.828E-07	8.828E-07	8.828E-07	0.000E+00
Maximum Doserate by Organ:		8.305E-05	4.569E-04	3.826E-04	7.464E-03	1.711E-04	3.745E-04	3.678E-04	0.000E+00

Maximum Organ Doserate (mRem/yr): 7.464E-03

Maximum Total Body Doserate (mRem/yr): 3.826E-04

Site Boundary NG Doserate Summary

Gas Receptor Location	Gamma (mRad/yr)	Beta (mRad/yr)	Total Body (mRem/yr)	Skin (mRem/yr)
WNW Site Boundary	3.839E-04	3.839E-04	3.636E-04	6.373E-04
NW Site Boundary	4.457E-04	4.457E-04	4.221E-04	7.398E-04

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Site/Unit/Discharge Point: PSL2

Maximum Individual NNG Dose Summary - Note: All Doses in mRem

Receptor	Agegroup	Bone	Liver	Total Body	Thyroid	Kidney	Lung	GI-LI	Skin
SE Nearest Res - Adult	Adult	4.304E-06	4.406E-06	4.243E-06	5.532E-05	4.549E-06	4.177E-06	4.252E-06	0.000E+00
SE Nearest Res - Child	Child	4.459E-06	4.502E-06	4.283E-06	8.606E-05	4.324E-06	4.186E-06	4.206E-06	0.000E+00
SE Nearest Res - Infant	Infant	4.392E-06	4.478E-06	4.238E-06	7.983E-05	4.204E-06	4.176E-06	4.162E-06	0.000E+00
SE Nearest Res - Teenager	Teenager	4.372E-06	4.506E-06	4.266E-06	6.909E-05	4.549E-06	4.198E-06	4.268E-06	0.000E+00
SE Visitor - Adult	Adult	1.994E-06	2.039E-06	1.968E-06	2.427E-05	2.101E-06	1.939E-06	1.971E-06	0.000E+00
SSW Near Garden - Adult	Adult	3.319E-07	3.389E-07	3.277E-07	3.830E-06	3.487E-07	3.232E-07	3.283E-07	0.000E+00
SSW Near Garden - Child	Child	3.425E-07	3.455E-07	3.304E-07	5.937E-06	3.332E-07	3.238E-07	3.251E-07	0.000E+00
SSW Near Garden - Teenager	Teenager	3.366E-07	3.458E-07	3.293E-07	4.774E-06	3.487E-07	3.246E-07	3.294E-07	0.000E+00
WSW Near Milk - Adult	Adult	2.471E-06	3.149E-06	2.241E-06	1.876E-04	2.406E-06	9.470E-07	9.972E-07	0.000E+00
WSW Near Milk - Child	Child	7.904E-06	7.824E-06	2.781E-06	5.621E-04	2.485E-06	1.366E-06	1.021E-06	0.000E+00
WSW Near Milk - Infant	Infant	1.569E-05	1.785E-05	3.823E-06	1.340E-03	2.471E-06	2.285E-06	1.036E-06	0.000E+00
WSW Near Milk - Teenager	Teenager	3.041E-06	4.167E-06	1.667E-06	2.850E-04	2.171E-06	4.198E-07	3.396E-07	0.000E+00

Maximum Dose by Organ: 1.569E-05 1.785E-05 4.283E-06 1.340E-03 4.549E-06 4.198E-06 4.268E-06 0.000E+00

Maximum Organ Dose (mRem): 1.340E-03

Maximum Total Body Dose (mRem): 4.283E-06

Maximum Individual NG Dose Summary

Gas Receptor Location	Gamma (mRad)	Beta (mRad)	Total Body (mRem)	Skin (mRem)
SE Nearest Res 1.52 mi 142 deg	5.698E-04	4.010E-04	5.396E-04	9.458E-04
SSW Near Gard 4.4 mi 207 deg	4.323E-05	3.042E-05	4.094E-05	7.175E-05
WSW Near Milk 3.43 mi 248 deg	7.673E-05	5.400E-05	7.266E-05	1.274E-04
SE Visitor	2.467E-04	1.736E-04	2.336E-04	4.095E-04

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Table 5A and 5B - Regulatory Guide 1.21 (2009)

Batch Release Summary

Unit: PSL1

A. Liquid Releases	Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year Totals
1. Number of batch releases	:	10	27	15	14	66
2. Total time period for Batch releases	(Minutes):	5.58E+03	1.77E+04	7.32E+03	7.66E+03	3.83E+04
3. Maximum time period for a batch release	(Minutes):	7.05E+02	1.92E+03	7.68E+02	7.02E+02	1.92E+03
4. Average time period for a batch release	(Minutes):	5.58E+02	6.55E+02	4.88E+02	5.47E+02	5.80E+02
5. Minimum time period for a batch release	(Minutes):	3.99E+02	2.89E+02	2.00E+00	4.69E+02	2.00E+00
6. Average stream flow during periods of release of liquid Effluent into a flowing stream	(LPM) :	1.94E+06	1.42E+06	2.04E+06	1.94E+06	1.73E+06

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B. Gaseous Releases		<u>Units</u>	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>	<u>Year Totals</u>
1.	Number of batch releases	:	1	0	0	3	4
2.	Total time period for batch releases	(Minutes):	1.05E+02	0.00E+00	0.00E+00	9.25E+02	1.03E+03
3.	Maximum time period for a batch release	(Minutes):	1.05E+02	0.00E+00	0.00E+00	6.50E+02	6.50E+02
4.	Average time period for a batch release	(Minutes):	1.05E+02	0.00E+00	0.00E+00	3.08E+02	2.58E+02
5.	Minimum time period for a batch release	(Minutes):	1.05E+02	0.00E+00	0.00E+00	1.10E+02	1.05E+02

END OF BATCH RELEASE SUMMARY REPORT

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Table 5A and 5B - Regulatory Guide 1.21 (2009)

Batch Release Summary

Unit: PSL2

A. Liquid Releases	Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year Totals
1. Number of batch releases	:	10	27	15	14	66
2. Total time period for Batch releases	(Minutes):	5.58E+03	1.77E+04	7.32E+03	7.66E+03	3.83E+04
3. Maximum time period for a batch release	(Minutes):	7.05E+02	1.92E+03	7.68E+02	7.02E+02	1.92E+03
4. Average time period for a batch release	(Minutes):	5.58E+02	6.55E+02	4.88E+02	5.47E+02	5.80E+02
5. Minimum time period for a batch release	(Minutes):	3.99E+02	2.89E+02	2.00E+00	4.69E+02	2.00E+00
6. Average stream flow during periods of release of liquid Effluent into a flowing stream	(LPM) :	1.94E+06	1.42E+06	2.04E+06	1.94E+06	1.73E+06

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B. Gaseous Releases	Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year Totals
1. Number of batch releases	:	24	22	35	28	109
2. Total time period for batch releases	(Minutes):	1.50E+03	5.36E+03	8.06E+03	2.99E+03	1.79E+04
3. Maximum time period for a batch release	(Minutes):	1.30E+02	1.44E+03	1.44E+03	7.12E+02	1.44E+03
4. Average time period for a batch release	(Minutes):	6.24E+01	2.44E+02	2.30E+02	1.07E+02	1.64E+02
5. Minimum time period for a batch release	(Minutes):	5.00E+01	4.30E+01	5.80E+01	5.90E+01	4.30E+01

END OF BATCH RELEASE SUMMARY REPORT

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**Table 6A and 6B - Regulatory Guide 1.21
Annual Liquid Effluents - Abnormal Release Summary**

No Data Found for Selected Search Criteria

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End of Annual Liquid Effluents - Abnormal Release Summary

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Table 6A and 6B - Regulatory Guide 1.21 (2009)
Annual Liquid Effluents - Abnormal Release Summary
Unit: PSL2

A. Liquid Releases	Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year Totals
1. Number of Releases	:	0	0	0	0	0
2. Total Time For All Releases	(Minutes):	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3. Maximum Time For A Release	(Minutes):	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4. Average Time For A Release	(Minutes):	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5. Minimum Time For A Release	(Minutes):	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6. Total activity for all releases	(Curies) :	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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B. Gaseous Releases	Units	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year Totals
1. Number of Releases	:	0	1	0	0	1
2. Total Time For All Releases	(Minutes):	0.00E+00	1.44E+03	0.00E+00	0.00E+00	1.44E+03
3. Maximum Time For A Release	(Minutes):	0.00E+00	1.44E+03	0.00E+00	0.00E+00	1.44E+03
4. Average Time For A Release	(Minutes):	0.00E+00	1.44E+03	0.00E+00	0.00E+00	1.44E+03
5. Minimum Time For A Release	(Minutes):	0.00E+00	1.44E+03	0.00E+00	0.00E+00	1.44E+03
6. Total activity for all releases	(Curies) :	0.00E+00	3.18E-03	0.00E+00	0.00E+00	3.18E-03

End of Annual Liquid Effluents - Abnormal Release Summary

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Table A-7A, Liquid Effluents - Abnormal Release Summary

Unit: PSL1

Starting: 1-Jan-2009 Ending: 31-Dec-2009

Liquid Releases	Units	1ST Quarter	2ND Quarter	3RD Quarter	4TH Quarter	Year Totals
1. Number of Releases		0	0	0	0	0
2. Total Time For All Releases	(Minutes)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3. Maximum Time For A Release	(Minutes)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4. Average Time For A Release	(Minutes)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5. Minimum Time For A Release	(Minutes)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6. Total activity for all releases	(Curies)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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Table A-7B, Gaseous Effluents - Abnormal Release Summary
Unit: PSL1

Starting: 1-Jan-2009 Ending: 31-Dec-2009

<u>Gaseous Releases</u>	<u>Units</u>	<u>1ST Quarter</u>	<u>2ND Quarter</u>	<u>3RD Quarter</u>	<u>4TH Quarter</u>	<u>Year Totals</u>
1. Number of Releases		0	0	0	0	0
2. Total Time For All Releases	(Minutes)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3. Maximum Time For A Release	(Minutes)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4. Average Time For A Release	(Minutes)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5. Minimum Time For A Release	(Minutes)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6. Total activity for all releases	(Curies)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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Table A-7A, Liquid Effluents - Abnormal Release Summary

Unit: PSL2

Starting: 1-Jan-2009 Ending: 31-Dec-2009

Liquid Releases	Units	1ST Quarter	2ND Quarter	3RD Quarter	4TH Quarter	Year Totals
1. Number of Releases		0	0	0	0	0
2. Total Time For All Releases	(Minutes)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3. Maximum Time For A Release	(Minutes)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4. Average Time For A Release	(Minutes)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5. Minimum Time For A Release	(Minutes)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6. Total activity for all releases	(Curles)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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Table A-7B, Gaseous Effluents - Abnormal Release Summary
Unit: PSL2

Starting: 1-Jan-2009 Ending: 31-Dec-2009

<u>Gaseous Releases</u>	<u>Units</u>	<u>1ST Quarter</u>	<u>2ND Quarter</u>	<u>3RD Quarter</u>	<u>4TH Quarter</u>	<u>Year Totals</u>
1. Number of Releases		0	1	0	0	1
2. Total Time For All Releases	(Minutes)	0.00E+00	1.44E+03	0.00E+00	0.00E+00	1.44E+03
3. Maximum Time For A Release	(Minutes)	0.00E+00	1.44E+03	0.00E+00	0.00E+00	1.44E+03
4. Average Time For A Release	(Minutes)	0.00E+00	1.44E+03	0.00E+00	0.00E+00	1.44E+03
5. Minimum Time For A Release	(Minutes)	0.00E+00	1.44E+03	0.00E+00	0.00E+00	1.44E+03
6. Total activity for all releases	(Curies)	0.00E+00	3.18E-03	0.00E+00	0.00E+00	3.18E-03

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**NRC Regulatory Guide 1.21 Report for Florida Power &
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 Table A-3**

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Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
 During Period From 01/01/2009 to 12/31/2009 Percent Cutoff: 1

Waste Stream: Resins, Filters, and Evaporator Bottoms

Waste Class	Volume		Curles Shipped	% Error (Ci)
	Ft ³	M ³		
A	3.62E+03	1.02E+02	1.61E+01	+/-25%
B	9.65E+01	2.73E+00	7.33E+01	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	3.71E+03	1.05E+02	8.94E+01	+/-25%

Waste Stream: Dry Active Waste

Waste Class	Volume		Curles Shipped	%Error (Ci)
	Ft ³	M ³		
A	3.07E+04	8.68E+02	2.57E+00	+/-25%
B	0.00E+00	0.00E+00	0.00E+00	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	3.07E+04	8.68E+02	2.57E+00	+/-25%

Waste Stream: Irradiated Components

Waste Class	Volume		Curles Shipped	% Error (Ci)
	Ft ³	M ³		
A	0.00E+00	0.00E+00	0.00E+00	+/-25%
B	0.00E+00	0.00E+00	0.00E+00	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	0.00E+00	0.00E+00	0.00E+00	+/-25%

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Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
 During Period From 01/01/2009 to 12/31/2009 Percent Cutoff: 1

Waste Stream: Other Waste

Waste Class	Volume		Curies Shipped	% Error (Ci)
	Ft ³	M ³		
A	0.00E+00	0.00E+00	0.00E+00	+/-25%
B	0.00E+00	0.00E+00	0.00E+00	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	0.00E+00	0.00E+00	0.00E+00	+/-25%

Waste Stream: Sum of All 4 Categories

Waste Class	Volume		Curies Shipped	% Error (Ci)
	Ft ³	M ³		
A	3.43E+04	9.71E+02	1.87E+01	+/-25%
B	9.65E+01	2.73E+00	7.33E+01	+/-25%
C	0.00E+00	0.00E+00	0.00E+00	+/-25%
All	3.44E+04	9.74E+02	9.20E+01	+/-25%

-Combined Waste Type Shipment, Major Volume Waste Type Shown

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Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
 During Period From 01/01/2009 to 12/31/2009

Number of Shipments	Mode of Transportation	Destination
18	Hittman Transport (TN)	EnergySolutions Bear Creek
2	Southern Pines Trucking	EnergySolutions Bear Creek
1	Tri-State Motor Transit	EnergySolutions Bear Creek
6	Hittman Transport (SC)	EnergySolutions LLC
1	Hittman Transport (TN)	EnergySolutions LLC
1	Hittman Transport (SC)	Studs vik Processing Facility LLC - Erwin

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 During Period From 01/01/2009 to 12/31/2009 Percent Cutoff: 1

Resins, Filters, and Evap Bottoms		
Waste Class A		
Nuclide Name	Percent Abundance	Curies
H-3	8.412%	1.35E+00
Be-7	1.669%	2.69E-01
Cr-51	2.913%	4.69E-01
Mn-54	2.168%	3.49E-01
Fe-55	15.038%	2.42E+00
Co-58	39.988%	6.44E+00
Co-60	5.941%	9.56E-01
Ni-63	16.580%	2.67E+00
Sb-125	3.752%	6.04E-01
Resins, Filters, and Evap Bottoms		
Waste Class B		
Nuclide Name	Percent Abundance	Curies
Mn-54	1.459%	1.07E+00
Fe-55	7.605%	5.57E+00
Co-60	9.797%	7.18E+00
Ni-63	77.814%	5.70E+01
Sb-125	1.247%	9.14E-01
Resins, Filters, and Evap Bottoms		
Waste Class All		
Nuclide Name	Percent Abundance	Curies
H-3	2.207%	1.97E+00
Mn-54	1.587%	1.42E+00
Fe-55	8.943%	8.00E+00
Co-58	7.866%	7.03E+00
Co-60	9.103%	8.14E+00
Ni-63	66.788%	5.97E+01
Sb-125	1.698%	1.52E+00
Dry Active Waste		
Waste Class A		
Nuclide Name	Percent Abundance	Curies
H-3	2.901%	7.47E-02
Cr-51	10.649%	2.74E-01
Mn-54	1.080%	2.78E-02
Fe-55	32.506%	8.37E-01
Co-58	30.500%	7.85E-01
Co-60	6.825%	1.71E-01
Ni-63	11.065%	2.85E-01
Zr-95	1.862%	4.79E-02
Nb-95	1.679%	4.32E-02
Dry Active Waste		
Waste Class All		
Nuclide Name	Percent Abundance	Curies
H-3	2.901%	7.47E-02

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Solid Waste Shipped Offsite for Disposal and Estimates of Major Nuclides by Waste Class and Stream
During Period From 01/01/2009 to 12/31/2009 Percent Cutoff: 1

Cr-51	10.649%	2.74E-01
Mn-54	1.080%	2.78E-02
Fe-55	32.506%	8.37E-01
Co-58	30.500%	7.85E-01
Co-60	6.625%	1.71E-01
Ni-63	11.065%	2.85E-01
Zr-95	1.862%	4.79E-02
Nb-95	1.679%	4.32E-02
Sum of All 4 Categories		
Waste Class A		
Nuclide Name	Percent Abundance	Curies
H-3	7.652%	1.43E+00
Be-7	1.439%	2.69E-01
Cr-51	3.979%	7.43E-01
Mn-54	2.018%	3.77E-01
Fe-55	17.446%	3.26E+00
Co-58	38.680%	7.22E+00
Co-60	6.035%	1.13E+00
Ni-63	15.819%	2.95E+00
Sb-125	3.263%	6.09E-01
Sum of All 4 Categories		
Waste Class B		
Nuclide Name	Percent Abundance	Curies
Mn-54	1.459%	1.07E+00
Fe-55	7.605%	5.57E+00
Co-60	9.797%	7.18E+00
Ni-63	77.814%	5.70E+01
Sb-125	1.247%	9.14E-01
Sum of All 4 Categories		
Waste Class All		
Nuclide Name	Percent Abundance	Curies
H-3	2.226%	2.05E+00
Mn-54	1.573%	1.45E+00
Fe-55	9.602%	8.83E+00
Co-58	8.499%	7.82E+00
Co-60	9.033%	8.31E+00
Ni-63	65.229%	6.00E+01
Sb-125	1.657%	1.52E+00

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ENCLOSURE A
INFORMATION FOR GROUND WATER PROTECTION PROTECTION PROGRAM
(4 PAGES)

INFORMATION FOR GROUND WATER PROTECTION PROGRAM

2009 Voluntary Communications to Local/State Authorities (1 Page)

9/15/2009 – A small leak on the component cooling water system led to a **voluntary** communication to Local/State authorities, per NEI 07-07. The sample was analyzed to be approximately 9000 pCi/L tritium, which is under the NEI groundwater limit of 30,000 pCi/L. After the leak was detected, the leakage was collected and processed through site radioactive waste system. Sampling of downstream sumps and settling ponds did not identify any detectable tritium activity. This event was documented in SITRIS Condition Report (CR) 2009-26402 and Emergency Notification #45354. Per NEI 07-07 Section 2.4c, this event should be included in the Annual Radioactive Effluent Release Report (ARERR).

INFORMATION FOR GROUND WATER PROTECTION PROGRAM

Section 8.5.9 (1 Page)

Bartlett Nuclear Report Generated for Florida Power & Light Company – St. Lucie Plant, Radiological Evaluation of Effluent Releases from Catch Basins to the East Settling Pond, December 2009

This report evaluated the potential release of tritium into the East Settling Pond through the storm-water drainage system and evaluates that potential against the criteria for a significant release point as defined in Regulatory Guide (RG) 1.21.

In RG 1.21, the NRC defines a significant release point as a release point *that contributes greater than 1.0% of the activity discharged from all the release points for a particular type of effluent considered.*

Report stated: *The conclusion of the radiological impact evaluation was that the addition of tritium (at the levels stipulated in the assessment) to the Intake structure via the East Settling Pond and South Pond from the storm-water drainage system does not result in the need to establish any new release points. It was determined that potential tritium releases via evaporation from the East Settling Pond alone (i.e., gaseous releases) represent <1.0% of the total activity released via all gaseous release points and therefore, does not qualify as a significant release point.*

This evaluation is documented in SITRIS CR 2010-296.

Well ID	H3 Jan 2009	H3 Feb 2009	Well ID	H3 Mar 2009	H3 Apr 2009	H3 May 2009	H3 Jun 2009	H3 Jul 2009	H3 Aug 2009	H3 Sep 2009	H3 Oct 2009	H3 Nov 2009	H3 Dec 2009
Diesel Unit 1 & 2	pCi/l	pCi/l	Diesel Unit 1 & 2	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l
MW-1		<MDA (430)	Inactive Not in GWPP										
MW-3		740	MW-3			<MDA (450)	840	570	680			620	
MW-4	890	500	MW-4	640	850	<MDA (460)	2030	1360	760	460	400	530	560
MW-5		<MDA (440)	MW-5			<MDA (460)			<MDA (430)			<MDA (400)	
MW-6	1370	1880	MW-6	1720	3350	2330	2570	1980	490	3170	3630	2600	1340
MW-7		<MDA (440)	MW-7			<MDA (460)				<MDA (430)			
MW-15	<MDC (440)	<MDA (440)	MW-15	650	680	620	670	<MDA (430)	<MDA (430)			<MDA (410)	
MW-16		<MDA (430)	MW-16			<MDA (440)			<MDA (430)			<MDA (410)	
MW-17	760	<MDA (440)	MW-17	840	720	490	<MDA (440)	<MDA (430)	<MDA (430)			420	
MW-18D		<MDA (440)	MW-18D	540	780	<MDA (460)	<MDA (440)	<MDA (430)	<MDA (430)			600	<MDA (460)
MW-19		<MDA (440)	MW-19			<MDA (460)			<MDA (430)			470	
MW-20		<MDA (430)	Inactive Not in GWPP										
MW-21		<MDA (430)	Inactive Not in GWPP										
MW-22D		730	MW-22D			490		450	610			<MDA (420)	
MW-24		<MDA (440)	Inactive Not in GWPP										
MW-25		1480	Inactive Not in GWPP			<MDA (450)							
MW-26		<MDA (430)	MW-26			<MDA (460)			<MDA (430)			<MDA (420)	
RW-1		490	Inactive Not in GWPP										
RW-2	5340	5380	RW-2	4990	6430	7470	10590	20680	5480	5210	4220	3430	6130
RW-3		<MDA (440)	Inactive Not in GWPP										
RW-4		<MDA (440)	RW-4			<MDA (460)			<MDA (430)			<MDA (410)	
RW-5		<MDA (430)	RW-5			<MDA (460)			<MDA (430)			<MDA (420)	
MW-30		480	MW-30	<MDA (450)	<MDA (430)	<MDA (450)	<MDA (440)		<MDA (430)			<MDA (410)	
MW-31	760	<MDA (430)	MW-31	470	660	520	490	<MDA (430)	<MDA (430)			580	
MW-32	<MDC (420)	<MDA (440)	MW-32	<MDA (430)	<MDA (430)	<MDA (460)			<MDA (430)			<MDA (400)	
MW-33		14650	MW-33	10870	8460	11040	2080	10710	10510	8860	8290	7390	6390
TLO Wells	pCi/l	pCi/l	TLO Wells	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l
Unit 1 - MW001		3840	Unit 1 - MW001	6180	9070	10930	6530	4370	4670	6540	3990	5390	3520
Unit 1 - MW002		1380	Unit 1 - MW002	1170	1390	1180	1190	1090	960	880	1260	820	750
Unit 1 - MW003		1010	Unit 1 - MW003	930	1710	1150	1210	900	960	670	1010	880	<MDA (470)
Unit 1 - MW004		<MDA (440)	Unit 1 - MW004	<MDA (450)	680	<MDA (440)	680	<MDA (430)	<MDA (420)	520	460	<MDA (420)	<MDA (470)
Unit 1-MW005		12800	Unit 1-MW005	9960	10540	6810	13700	2320	1010	6230	5420	1800	2580
Unit 2 - MW001		990	Unit 2 - MW001			1530	770	480	740	1420	960	1840	1030
Unit 2 - MW002		5030	Unit 2 - MW002			8210	7840	5060	2030	2850	2460	1640	1620
Unit 2 - MW003		1980	Unit 2 - MW003	1480	1840	1630	1250	2080	2350	1520	2340	1500	1500
Unit 2 - MW004		2020	Unit 2 - MW004	1510	1710	1840	1980	2100	1940	1690	1650	1390	1460

Well ID	H3 Jan 2009	H3 Feb 2009	Well ID	H3 Mar 2009	H3 Apr 2009	H3 May 2009	H3 Jun 2009	H3 Jul 2009	H3 Aug 2009	H3 Sep 2009	H3 Oct 2009	H3 Nov 2009	H3 Dec 2009
Mixed Plume	pCi/l	pCi/l	Mixed Plume	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l
(S)-MW-1		<MDA (430)	(S)-MW-1										
(S)-MW-3		<MDA (440)	Inactive Not in GWPP										
(S)-MW-4		510	(S)-MW-4	<MDA (450)	<MDA (440)	830		780	930	680	880	600	1120
(S)-MW-5		1660	Inactive Not in GWPP										
(S)-MW-6		640	(S)-MW-6			<MDA (460)			<MDA (430)			<MDA (410)	
(S)-MW-7A		<MDA (440)	(S)-MW-7A										
(S)-MW-10		<MDA (430)	Inactive Not in GWPP										
(S)-MW-11		1290	(S)-MW-11	900	1040	1440	1290	1100	1330			930	
(S)-MW-12		<MDA (440)	Inactive Not in GWPP										
(S)-MW-13D		<MDA (440)	Inactive Not in GWPP										
(S)-MW-14		<MDA (430)	Inactive Not in GWPP										
(S)-MW-15D		590	(S)-MW-15D	<MDA (450)	590	<MDA (450)	<MDA (440)	480	<MDA (430)	490	480	<MDA (420)	<MDA (450)
(S)-MW-16		<MDA (440)	(S)-MW-16	<MDA (450)	<MDA (440)	<MDA (440)			<MDA (430)			<MDA (420)	
(S)-MW-16i		<MDA (440)	(S)-MW-16i	<MDA (430)	<MDA (440)	<MDA (450)			720		<MDA (410)	<MDA (410)	<MDA (450)
(S)-MW-17		510	(S)-MW-17	<MDA (450)	<MDA (440)	570	650	680	460	610	460	<MDA (410)	560
(S)-MW-18		<MDA (440)	(S)-MW-18	<MDA (450)	<MDA (450)	<MDA (440)			<MDA (430)			<MDA (410)	
(S)-MW-19		<MDA (440)	(S)-MW-19	<MDA (450)	<MDA (440)	<MDA (440)			520		<MDA (400)	<MDA (410)	<MDA (450)

Well ID	H3 Jan 2009	H3 Feb 2009	Well ID	H3 Mar 2009	H3 Apr 2009	H3 May 2009	H3 Jun 2009	H3 Jul 2009	H3 Aug 2009	H3 Sep 2009	H3 Oct 2009	H3 Nov 2009	H3 Dec 2009
Neutralization Basin		pCi/l	Neutralization Basin	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l
PSLED - 1		<MDA (440)	Inactive Not in GWPP										
PSLED - 2		<MDA (430)	PSLED - 2										
PSLED - 3		<MDA (440)	Inactive Not in GWPP										
PSLED - 4		<MDA (430)	Inactive Not in GWPP										
MW-1		<MDA (430)	MW-1										
MW-2		<MDA (440)	MW-2										

Well ID	H3 Jan 2009	H3 Feb 2009	Well ID	H3 Mar 2009	H3 Apr 2009	H3 May 2009	H3 Jun 2009	H3 Jul 2009	H3 Aug 2009	H3 Sep 2009	H3 Oct 2009	H3 Nov 2009	H3 Dec 2009
Site Boundary		pCi/l	Site Boundary	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l	pCi/l
H-76		<MDA (430)	H-76			<MDA (440)			state			state	
H-77		<MDA (430)	H-77			<MDA (440)			state			state	
H-78		<MDA (440)	H-78			<MDA (450)			state			state	
H-79		<MDA (430)	H-79			<MDA (440)			state			state	