

**APPENDIX A. DISCUSSION OF NRC LICENSE RENEWAL
NATIONAL ENVIRONMENTAL POLICY ACT ISSUES**

Florida Power & Light Company (FPL) has prepared this *Environmental Report - Operating License Renewal Stage; St. Lucie Units 1 and 2* in accordance with the requirements of U.S. Nuclear Regulatory Commission (NRC) regulation 10 CFR 51.53. The NRC included in the regulation a list of National Environmental Policy Act (NEPA) issues for license renewal of nuclear power plants. Table A-1 lists these 92 issues with assigned categorization and identifies where FPL addressed each issue in the Environmental Report. A cross-reference to the section in the GEIS containing the NRC's generic analysis is also presented for the issues applicable to St. Lucie Units 1 & 2 license renewal. For expediency, FPL has assigned numbers to each issue and uses the issue numbers throughout the Environmental Report.

LICENSE RENEWAL APPLICATION
ST. LUCIE UNITS 1 & 2

TABLE A-1
ST. LUCIE UNITS 1 & 2 ENVIRONMENTAL REPORT
DISCUSSION OF LICENSE RENEWAL NEPA ISSUES

Issue ^a	Category ^a	Section of this Environmental Report	GEIS Cross Reference ^b (Section/Page)
1. Impacts of refurbishment on surface water quality	1	NA ^c	
2. Impacts of refurbishment on surface water use	1	NA ^c	
3. Altered current patterns at intake and discharge structures	1	4.1	4.2.1.2.1/4-4
4. Altered salinity gradients	1	NA ^d	
5. Altered thermal stratification of lakes	1	NA ^d	
6. Temperature effects on sediment transport capacity	1	4.1	4.2.1.2.3/4-6
7. Scouring caused by discharged cooling water	1	4.1	4.2.1.2.3/4-6
8. Eutrophication	1	NA ^d	
9. Discharge of chlorine or other biocides	1	4.1	4.2.1.2.4/4-10
10. Discharge of sanitary wastes and minor chemical spills	1	4.1	4.2.1.2.4/4-10
11. Discharge of other metals in waste water	1	4.1	4.2.1.2.4/4-10
12. Water use conflicts (plants with once-through cooling systems)	1	4.1	4.2.1.3/4-13
13. Water use conflicts (plants with cooling ponds or cooling towers using makeup water from a small river with low flow)	2	NA ^f	
14. Refurbishment impacts to aquatic resources	1	NA ^c	
15. Accumulation of contaminants in sediments or biota	1	4.1	4.2.1.2.4/4-10
16. Entrainment of phytoplankton and zooplankton	1	4.1	4.2.2.1.1/4-15
17. Cold shock	1	4.1	4.2.2.1.5/4-18
18. Thermal plume barrier to migrating fish	1	4.1	4.2.2.1.4/4-17

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TABLE A-1 (continued)
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Issue ^a	Category ^a	Section of this Environmental Report	GEIS Cross Reference ^b (Section/Page)
19. Distribution of aquatic organisms	1	4.1	4.2.2.1.6/4-19
20. Premature emergence of aquatic insects	1	NA ^e	
21. Gas supersaturation (gas bubble disease)	1	4.1	4.2.2.1.8/4-21
22. Low dissolved oxygen in the discharge	1	4.1	4.2.2.1.9/4-23
23. Losses from predation, parasitism, and disease among organisms exposed to sublethal stresses	1	4.1	4.2.2.1.10/4-24
24. Stimulation of nuisance organisms (e.g., shipworms)	1	4.1	4.2.2.1.11/4-25
25. Entrainment of fish and shellfish in early life stages for plants with once-through and cooling pond heat dissipation systems	2	4.2	4.2.2.1.2/4-16
26. Impingement of fish and shellfish for plants with once-through and cooling pond heat dissipation systems	2	4.3	4.2.2.1.3/4-16
27. Heat shock for plants with once-through and cooling pond heat dissipation systems	2	4.4	4.2.2.1.4/4-17
28. Entrainment of fish and shellfish in early life stages for plants with cooling-tower-based heat dissipation systems	1	NA ^f	
29. Impingement of fish and shellfish for plants with cooling-tower-based heat dissipation systems	1	NA ^f	
30. Heat shock for plants with cooling-tower-based heat dissipation systems	1	NA ^f	
31. Impacts of refurbishment on groundwater use and quality	1	NA ^c	

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32. Groundwater use conflicts (potable and service water; plants that use < 100 gpm)	1	NA ^g	
33. Groundwater use conflicts (potable, service water, and dewatering; plants that use > 100 gpm)	2	NA ^g	
34. Groundwater use conflicts (plants using cooling towers withdrawing makeup water from a small river)	2	NA ^g	
35. Groundwater use conflicts (Ranney wells)	2	NA ^h	
36. Groundwater quality degradation (Ranney wells)	1	NA ^h	
37. Groundwater quality degradation (saltwater intrusion)	1	NA ^g	
38. Groundwater quality degradation (cooling ponds in salt marshes)	1	NA ^{f,g}	
39. Groundwater quality degradation (cooling ponds at inland sites)	2	NA ^{f,g}	
40. Refurbishment impacts to terrestrial resources	2	4.5	3.6/3-6
41. Cooling tower impacts on crops and ornamental vegetation	1	NA ^f	
42. Cooling tower impacts on native plants	1	NA ^f	
43. Bird collisions with cooling towers	1	NA ^f	
44. Cooling pond impacts on terrestrial resources	1	NA ^f	
45. Power line right-of-way management (cutting and herbicide application)	1	4.1	4.5.6.1/4-71
46. Bird collisions with power lines	1	4.1	4.5.6.2/4-74

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Issue ^a	Category ^a	Section of this Environmental Report	GEIS Cross Reference ^b (Section/Page)
47. Impacts of electromagnetic fields on flora and fauna (plants, agricultural crops, honeybees, wildlife, livestock)	1	4.1	4.5.6.3/4-77
48. Floodplains and wetlands on power line right-of-way	1	4.1	4.5.7/4-81
49. Threatened or endangered species	2	4.6	3.9/3-48, 4.1/4-1
50. Air quality during refurbishment (nonattainment and maintenance areas)	2	4.7	3.3/3-2
51. Air quality effects of transmission lines	1	4.1	4.5.2/4-62
52. Onsite land use	1	4.1	3.2/3-1
53. Power line right-of-way land-use impacts	1	4.1	4.5.3/4-62
54. Radiation exposures to the public during refurbishment	1	NA ^c	
55. Occupational radiation exposures during refurbishment	1	NA ^c	
56. Microbiological organisms (occupational health)	1	4.1	4.3.6/4-48
57. Microbiological organisms (public health)(plants using lakes or canals, or cooling towers or cooling ponds that discharge to a small river)	2	NA ^{d,f}	
58. Noise	1	4.1	4.3.7/4-49
59. Electromagnetic fields, acute effects (electric shock)	2	4.8	4.5.4.1/4-66
60. Electromagnetic fields, chronic effects	NA ⁱ	4.1.3	
61. Radiation exposures to public (license renewal term)	1	4.1	4.6.2/4-87
62. Occupational radiation exposures (license renewal term)	1	4.1	4.6.3/4-95
63. Housing impacts	2	4.9	3.7.2/3-10, 4.7.1/4-101

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Issue ^a	Category ^a	Section of this Environmental Report	GEIS Cross Reference ^b (Section/Page)
64. Public services: public safety, social services, and tourism and recreation	1	4.1	3.7.4/3-14, 3.7.4.3/3-18, 3.7.4.4/3-19, 3.7.4.6/3-20, 4.7.3/4-104, 4.7.3.3/4-106, 4.7.3.4/4-107, 4.7.3.6/4-107
65. Public services: public utilities	2	4.10	3.7.4.5/3-19, 4.7.3.5/4-107
66. Public services, education (refurbishment)	2	4.11	3.7.4.1/3-15
67. Public services, education (license renewal term)	1	4.1	4.7.3.1/4-106
68. Offsite land use (refurbishment)	2	4.12.1	3.7.5/3-20
69. Offsite land use (license renewal term)	2	4.12.2	4.7.4/4-107
70. Public services, transportation	2	4.13	3.7.4.2/3-17, 4.7.3.2/4-106
71. Historic and archaeological resources	2	4.14	3.7.7/3-23, 4.7.7/4-114
72. Aesthetic impacts (refurbishment)	1	NA ^c	
73. Aesthetic impacts (license renewal term)	1	4.1	4.7.6/4-111
74. Aesthetic impacts of transmission lines (license renewal term)	1	4.1	4.5.8/4-83
75. Design basis accidents	1	4.1	5.3.2/5-11, 5.5.1/5-114
76. Severe accidents	2	4.15	5.3.3/5-12, 5.5.2/5-114
77. Offsite radiological impacts (individual effects from other than the disposal of spent fuel and high-level radioactive waste)	1	4.1	6.2.4/6-27, 6.6/6-87
78. Offsite radiological impacts (collective effects)	1	4.1	6.2.4/6-27, 6.6/6-88
79. Offsite radiological impacts (spent fuel and high-level radioactive waste disposal)	1	4.1	6.2.4/6-28, 6.6/6-88
80. Nonradiological impacts of the uranium fuel cycle	1	4.1	6.2.2.6/6-20, 6.2.2.7/6-20, 6.2.2.8/6-21, 6.2.2.9/6-21, 6.6/6-90
81. Low-level radioactive waste storage and disposal	1	4.1	6.4.2/6-36, 6.4.3/6-37, 6.4.4/6-48, 6.6/6-90

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Issue ^a	Category ^a	Section of this Environmental Report	GEIS Cross Reference ^b (Section/Page)
82. Mixed waste storage and disposal	1	4.1	6.4.5/6-63, 6.6/6-91
83. Onsite spent fuel	1	4.1	6.4.6/6-70, 6.6/6-91
84. Nonradiological waste	1	4.1	6.5/6-86, 6.6/6-92
85. Transportation	1	4.1	Addendum 1 (Ref. A.0-2)
86. Radiation doses (decommissioning)	1	4.1	7.3.1/7-15, 7.4/7-25
87. Waste management (decommissioning)	1	4.1	7.3.2/7-19, 7.4/7-25
88. Air quality (decommissioning)	1	4.1	7.3.3/7-21, 7.4/7-25
89. Water quality (decommissioning)	1	4.1	7.3.4/7-21, 7.4/7-25
90. Ecological resources (decommissioning)	1	4.1	7.3.5/7-21, 7.4/7-25
91. Socioeconomic impacts (decommissioning)	1	4.1	7.3.7/7-24, 7.4/7-25
92. Environmental justice	NA ⁱ	4.16	Not in GEIS

NOTES:

- a. Source: 10 CFR 51, Subpart A, Appendix B, Table B-1 (Issue numbers added to facilitate discussion).
- b. Source: Ref. A.0-1.
- c. NRC findings are not applicable because FPL has no plans for major refurbishment.
- d. Not applicable because St. Lucie Units 1 & 2 discharge to an ocean rather than an estuary or lake.
- e. Not applicable because St. Lucie Units 1 & 2 discharge to saline waters that do not provide a viable environment for aquatic insects.
- f. Not applicable because St. Lucie Units 1 & 2 are not equipped with cooling ponds or cooling towers.
- g. Not applicable because St. Lucie Units 1 & 2 are not direct users of groundwater (no dewatering; potable and service water are from municipal supply).
- h. Not applicable because St. Lucie Units 1 & 2 do not use Ranney wells.
- i. Not applicable. Regulation does not categorize this issue.

FPL = Florida Power & Light Company

GEIS = *Generic Environmental Impact Statement for License Renewal of Nuclear Plants*

NA = Not applicable

NEPA = National Environmental Policy Act

NRC = U.S. Nuclear Regulatory Commission

Ref. = Reference

A.1 REFERENCES

- A-1 U.S. Nuclear Regulatory Commission. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants*. NUREG-1437. Office of Nuclear Regulatory Research. Washington, D.C. May 1996.
- A-2 U.S. Nuclear Regulatory Commission. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants*. Section 6.3, "Transportation," and Table 9.1, "Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants." NUREG-1437, Vol. 1, Addendum 1. Office of Nuclear Reactor Regulation. Washington, D.C. August 1999.

APPENDIX B. CLEAN WATER ACT DOCUMENTATION

<u>Item</u>	<u>Page</u>
Notice of Permit, Drew, M. (DEP) to N. Whiting (FPL)	B-2
State of Florida Industrial Wastewater Facility Permit No. FL0002208	B-4

DEP = Department of Environmental Protection
FPL = Florida Power & Light Company

LICENSE RENEWAL APPLICATION
ST. LUCIE UNITS 1 & 2



Jeb Bush
Governor

Department of
Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CERTIFIED MAIL

In the Matter of an
Application for Permit by:
Florida Power & Light Company
6501 S. Ocean Drive
Jensen Beach, Florida 34957

DEP File # FL0002208-001-IW1S
St. Lucie County

Attention: Nick Whiting, Environmental Compliance Supervisor, St. Lucie Plant

NOTICE OF PERMIT

Enclosed is Permit Number FL0002208 to operate wastewater treatment and effluent disposal facilities for Units 1 and 2 of the St. Lucie Power Plant located in St. Lucie County, Florida issued under Section 403.0885, Florida Statutes and DEP rule 62-620, Florida Administrative Code.

Any party to this order (permit) has the right to seek judicial review of the permit under section 120.68 of the Florida Statutes, by the filing of a Notice of Appeal under rule 9.110 of the Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection, Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000 and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

A handwritten signature in cursive script that reads "Mimi Drew".

Mimi Drew
Division Director
Division of Water Resource Management

2600 Blair Stone Road
Tallahassee, FL 32399-2400
(850) 487-1855

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

LICENSE RENEWAL APPLICATION
ST. LUCIE UNITS 1 & 2

FPL-St. Lucie Power Plant
Facility ID Number FL0002208

Page 2 of 2

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed by certified mail before the close of business on 01-10-00 to the listed persons.

FILING AND ACKNOWLEDGMENT

FILED, on this date, under section 120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

G. Shields 01-10-00

Clerk

Date

Copies furnished to:

Douglas Mundrick, P.E. - Chief EPA
Paula Lewis - Chairperson, Board of St. Lucie County Commissioners
Jennifer Fitzwater - DEP Tallahassee
Tim Powell - DEP Southeast District

LICENSE RENEWAL APPLICATION
ST. LUCIE UNITS 1 & 2



Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

STATE OF FLORIDA

INDUSTRIAL WASTEWATER FACILITY PERMIT

PERMITTEE:

Florida Power & Light Company
6501 S. Ocean Drive
Jensen Beach, Florida 34957

PERMIT NUMBER: FL0002208-Major
ISSUANCE DATE: January 10, 2000
EXPIRATION DATE: January 9, 2005

FACILITY:

St. Lucie Power Plant
Units 1 and 2
Hutchinson Island
St. Lucie County, Florida

Latitude: 27° 20' 54" Longitude: 80° 14' 44"

This permit is issued under the provisions of Chapter 403, Florida Statutes, and applicable rules of the Florida Administrative Code and constitutes authorization to discharge to waters of the state under the National Pollutant Discharge Elimination System. The above named permittee is hereby authorized to operate the facilities shown on the application and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

OPERATION: The facility consists of two nuclear powered steam electric generating units (Unit 1 and Unit 2) and each unit is nominally rated at 850 MW. The facility discharge consists of once-through cooling water, auxiliary equipment cooling water, wastewater plant makeup water, treatment system wastewater, steam generator blowdown, industrial and non-industrial stormwater, canal debris, equipment area floor drains and treated non-radioactive wastes/liquid radiation waste.

WASTEWATER TREATMENT: Consists of screening and chlorination of the once-through cooling water, neutralization, settling, ion exchange and micron filtration to the intake and discharge canal.

EFFLUENT DISPOSAL: An existing 1477 MGD annual average daily flow of treated effluent is discharged via outfall D-001 (Condenser once through cooling water and auxiliary equipment cooling water) to the site discharge canal to the point of discharge (POD) (latitude: 27° 21' 05" longitude: 80° 14' 26") thence to the Atlantic Ocean, a Class III marine water. This permit authorizes discharge from existing internal outfalls I-003 (Liquid radiation waste), I-005 (Steam generator blowdown), I-06B (Former oil storage area), I-06C (Non-industrial related storm water), I-007 (Intake screen wash water), and I-008 Evaporation percolation basin

IN ACCORDANCE WITH: The limitations, monitoring requirements and other conditions set forth in Part I through Part VIII on pages 2 through 28 of this permit.

**LICENSE RENEWAL APPLICATION
ST. LUCIE UNITS 1 & 2**

PERMITTEE:
Florida Power & Light
St. Lucie Power Plant
Unit 1 & 2
6501 S. Ocean Drive
Jensen Beach, Florida 34957

PERMIT NUMBER: FL0002208
ISSUANCE DATE: January 10, 2000
EXPIRATION DATE: January 9, 2005

I. Effluent Limitations and Monitoring Requirements

A. Surface Water Discharges

1. During the period beginning on the effective date of this permit and lasting through expiration, the permittee is authorized to discharge from outfalls **D-001 [formerly (OSN) 001]** - Condenser once through cooling water and auxiliary equipment cooling water from Units 1 & 2 to the discharge canal thence the Atlantic Ocean.
- a. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Maximum	Measurement Frequency	Sample Type	Sample Point
Flow, MGD	Report	Hourly	Pump Logs	INT-1
Discharge Temperature, °F	113 ^{1,2}	Hourly	Recorders	EFF-2
Temperature Rise, °F	30 ^{1,2}	Hourly	Recorders	
Total Residual Oxidants (TRO), mg/l	0.10 (See item A.1.b.)	Continuous	Recorders ³	EFF-2
Time of Condenser Chlorine Addition, minutes/day/unit	120	Daily	Log	EFF-2
Free Available Oxidants, mg/l	0.5 (See item A.1.b.)	1/2 months	Multiple Grabs ⁴	EFF-1
Toxicity (Acute)	(See section I.B.12)			EFF-2

- b. Free available oxidants (FAO) shall not exceed an average concentration of 0.2 mg/l and maximum instantaneous concentration of 0.5 mg/l at the outlet corresponding to an individual condenser during any chlorination period. Neither FAO nor total residual oxidants (TRO) may be discharged from either unit condensers for more than two hours in any one day and not more than one unit may discharge FAO or TRO from its condensers at any one time. Additionally, TRO shall not exceed a maximum instantaneous concentration of 0.10 mg/l at any one time as measured at the POD prior to discharge to the Atlantic Ocean. Auxiliary equipment cooling water may receive continuous low-level chlorination.

¹ At the point of discharge, the heated water temperature from the diffusers shall not exceed 113°F or 30°F above ambient at any time except that the maximum discharge temperature shall be limited to 117°F or 32°F above ambient during condenser and/or circulating water pump maintenance, throttling circulating water pumps to minimize use of chlorine, and/or fouling of circulating water system. This temperature may be measured at a point within the discharge canal. (In determining the temperature differential, the time of travel through the plant may be considered). In the event that discharge temperature exceeds 113°F the permittee shall notify the Department within 5 days.

² The ambient ocean surface temperature shall not exceed 97°F as an instantaneous maximum at any point.

³ During periods of monitor outage of more than 7 days, monitoring for TRO shall be conducted 1/week on not less than three grab samples during daylight hours. Additional grab samples shall be conducted during periods of TRO discharge from condensers.

⁴ Multiple grabs shall consist of grab samples collected at the approximate beginning of FAO/TRO discharge and once every 15 minutes thereafter until the end of FAO/TRO discharge.

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- c. Samples taken in compliance with the monitoring requirements specified in item 1.a. shall be taken at the following locations: Intake temperature and flow at plant intakes (INT-1), free available chlorine at the outlet corresponding to an individual condenser (EFF-1), and all other parameters at the POD prior to discharge to the Atlantic Ocean (EFF-2).

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PERMITTEE:
Florida Power & Light
St. Lucie Power Plant
Unit 1 & 2
6501 S. Ocean Drive
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PERMIT NUMBER: FLO002208
ISSUANCE DATE: January 10, 2000
EXPIRATION DATE: January 9, 2005

2. During the period beginning on the effective date of this permit and lasting through expiration, the permittee is authorized to discharge from internal outfall I-003 [formerly (OSN) 003] - Liquid radiation waste discharge to the discharge canal to the Atlantic Ocean.
- a. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Daily Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Flow, MGD	Report	Report	1/Batch	Calculation	EFF-3
Oil and Grease, mg/l	15.0	20.0	Annually	Grab	EFF-3
Total Suspended Solids, mg/l	30.0	100.0	1/Batch	Grab	EFF-3

- b. This discharge is regulated by the U.S. Regulatory Commission (NRC) under the provisions of its operating license and is monitored and reported to the NRC. No additional monitoring of the radiological aspects of this discharge is required.
- c. There shall be no discharge of floating or visible foam or oil sheen in such amounts as to create a nuisance, nor shall the effluent cause a visible sheen on the receiving waterbody (i.e., Atlantic Ocean).
- d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: discharge from the radiation waste system prior to mixing with any other waste stream (EFF-3).

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Florida Power & Light
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Unit 1 & 2
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PERMIT NUMBER: FL0002208
ISSUANCE DATE: January 10, 2000
EXPIRATION DATE: January 9, 2005

3. During the period beginning on the effective date of this permit and lasting through expiration, the permittee is authorized to discharge from internal outfall I-005 [formerly (OSN) 005] - Steam generator blowdown to the discharge canal to the Atlantic Ocean.
- a. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Daily Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Flow, MGD	Report	Report	1	Calculation	EFF-5
Oil and Grease, mg/l	15.0	20.0	1	Grab	EFF-5
Total Suspended Solids, mg/l	30.0	100.0	1	Grab	EFF-5
Boron, mg/l	-----	4.0	1, 2	Calculation ³	EFF-2
Hydrazine, mg/l	-----	0.30	1, 2	Calculation ³	EFF-2
Dimethylamine, mg/l	-----	Report	1, 2	Calculation ³	EFF-2
Carbohydrazide, mg/l	-----	Report	1, 2	Calculation ³	EFF-2

- b. There shall be no discharge of floating or visible foam or oil sheen in such amounts as to create a nuisance, nor shall the effluent cause a visible sheen on the receiving waterbody (i.e., discharge canal).
- c. Samples taken in compliance with the monitoring requirements specified above shall be taken at the point of discharge prior to entering the discharge canal (EFF-5 or at EFF-2 (POD)).

¹ One per discharge event or one per week which ever is more frequent, unless there is no discharge for that week. Total volume of batch and period of discharge shall be reported.

² Boron and hydrazine or carbohydrazide shall be monitored once per batch by a grab sample, during wet lay-up discharges that result from the start-up of a unit following a refueling outage.

³ A grab sample shall be taken at the discharge of the steam generator to the discharge canal and the following calculations shall be used to determine the concentration from the discharge canal to the Atlantic Ocean [point of discharge (POD)]:

$$\frac{\text{Steam Generator Blowdown Flow} \times \text{Blowdown Boron Concentration}}{\text{Once Through Cooling Water Flow}} = \text{Boron at the POD}$$

$$\frac{\text{Steam Generator Blowdown Flow} \times \text{Blowdown Hydrazine Concentration}}{\text{Once Through Cooling Water Flow}} = \text{Hydrazine at the POD}$$

$$\frac{\text{Steam Generator Blowdown Flow} \times \text{Blowdown Dimethylamine Concentration}}{\text{Once Through Cooling Water Flow}} = \text{Dimethylamine at the POD}$$

$$\frac{\text{Steam Generator Blowdown Flow} \times \text{Blowdown Carbohydrazide Concentration}}{\text{Once Through Cooling Water Flow}} = \text{Carbohydrazide at the POD}$$

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PERMIT NUMBER: FL0002208
ISSUANCE DATE: January 10, 2000
EXPIRATION DATE: January 9, 2005

4. During the period beginning on the effective date of this permit and lasting through expiration, the permittee is authorized to discharge from internal outfall **I-06B [formerly (OSN) 006B]** – Former oil storage area - industrial related storm water to the intake canal.
- a. Such discharges shall be limited and monitored by the permittee as specified below and in Section I.B.:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS ¹		
	Daily Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Flow, MGD	Report	Report	Annually	Estimate	EFF-6
Total Suspended Solids, mg/l	Report	Report	Annually	Grab	EFF-6
Oil and Grease, mg/l	Report	Report	Annually	Grab	EFF-6

- b. There shall be no discharge of floating or visible foam or oil sheen in such amounts as to create a nuisance, nor shall the effluent cause a visible sheen on the receiving waterbody (i.e., discharge canal).
- c. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: nearest accessible point after final treatment but prior to discharge to the receiving stream (EFF-6).

¹ Monitoring requirements apply once per year during the first 30 minutes of a rainfall event.

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5. During the period beginning on the effective date of this permit and lasting through expiration, the permittee is authorized to discharge from internal outfall I-06C [formerly (OSN) 006C] - Non-industrial related storm water to the Mangrove Impoundment 8E.
- a. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS ¹		
	Daily Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Flow, MGD	Report	Report	1/Annually	Estimate	EFF-7
Oil and Grease, mg/l	Report		1/Annually	Grab	EFF-7

- b. There shall be no discharge of floating or visible foam or oil sheen in such amounts as to create a nuisance, nor shall the effluent cause a visible sheen on the receiving waterbody (i.e., discharge canal).
- c. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: nearest accessible point after final treatment but prior to discharge to the receiving stream (EFF-7).

¹ Monitoring requirements apply annually during the first 30 minutes of a rainfall event.

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6. During the period beginning on the effective date of this permit and lasting through expiration, the permittee is authorized to discharge from internal outfall I-007 [formerly (OSN) 007] - Intake screen wash water to the intake canal.
 - a. Discharge of intake screen wash water is permitted without limitations or monitoring requirements.
 - b. There shall be no discharge of floating or visible foam or oil sheen in such amounts as to create a nuisance, nor shall the effluent cause a visible sheen on the receiving waterbody (i.e., discharge canal).

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7. During the period beginning on the effective date of this permit and lasting through expiration, the permittee is authorized to discharge from internal outfall I-008 – Evaporation percolation basin - industrial related storm water to the intake canal.
- a. Such discharges shall be limited and monitored by the permittee as specified below and in Section I.B.:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Daily Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Flow, MGD	Report	Report	1/Week	Calculation	EFF-8
Total Suspended Solids, mg/l	30.0	100.0	1/Week	Composite	EFF-8
Oil and Grease, mg/l	15.0	20.0	1/Week	Grab	EFF-8

- b. There shall be no discharge of floating or visible foam or oil sheen in such amounts as to create a nuisance, nor shall the effluent cause a visible sheen on the receiving waterbody (i.e., discharge canal).
- c. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: nearest accessible point after final treatment but prior to discharge to the receiving stream (EFF-8).
- d. Monitoring requirements are applicable only during discharge of the evaporation percolation basin.

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B. Other Limitations and Monitoring and Reporting Requirements

1. The Sampling and Testing Methods and Method of Detection Limits applicable to this permit shall be in accordance with Department established and published approved analytical methods and corresponding Department established MDLs (method detection limits) and PQLs (practical quantification limits). The approved list, which is titled "Florida Department of Environmental Protection Table Required By Rule 62-4.246(4) Testing Methods for Discharge to Surface Water" dated June 21, 1996, is available from the Department on request. Any method and corresponding MDL and PQL listed in the above described table may be used for reporting as long as it meets the following requirements;
 - a) The PQL for the specific parameter measured is less than or equal to the permit limit or the water quality criteria stated in the applicable section of 62-302 FAC. Parameters that are listed as "report only" in the permit shall use methods which provide a PQL which is equal to or less than the applicable water quality criteria stated in 62-302 FAC.
 - b) If the PQL's for all methods available in the approved list are above the stated permit limit or applicable water quality criteria for that parameter then the method with the lowest available PQL shall be used.

In general the MDLs and PQLs as described above shall constitute the minimum reporting levels and the Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those described above. However, minimally higher MDL/PQLs may be used if those MDL/PQLs are included in an update of the Permittee's Department Approved Comprehensive Quality Assurance Plan (CompQAP) and the permittee has notified the Department's Industrial Wastewater Section. In Addition, certain other method MDL/PQLs may be acceptable if the PQL value for a particular method is less than the permit limit, the MDL/PQL is included in the Department approved CompQAP, and the permittee has notified the Department's Industrial Wastewater Section.

Unless otherwise specified, sample results shall be reported as indicated on the instructions included with the Discharge Monitoring Report:

2. Monitoring results obtained for each calendar month shall be summarized for that month and reported on a Discharge Monitoring Report (DMR), Form 62-620.910(10), postmarked no later than the 28th day of the month following the completed calendar month. For example, data for January shall be submitted by February 28. Signed copies of the DMR shall be submitted to the address specified below:

Florida Department of Environmental Protection
Mail Station 3551
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

If no discharge occurs during the reporting period, sampling requirements of this permit do not apply. The statement "No discharge" shall be written on the DMR form. If, during the term period of this permit, the facility ceases to discharge, the Department shall be notified immediately upon cessation of discharge. Such notification shall be in writing.

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3. Unless specified otherwise in this permit, all other reports and notifications required by this permit, including twenty-four hour notifications, shall be submitted to or reported to, as appropriate, the address specified below:

Florida Department of Environmental Protection
Southeast District Office
Industrial Wastewater Section
1801 SE Hillmoor Drive, Suite C-204
Port St. Lucie, Florida 34952
(561)871-7662

4. The permittee shall report all visible discharges of floating materials contributed by plant operations, such as ash or an oil sheen, when submitting DMR's.
5. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.
6. Discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which ultimately may be released to waters of the State is prohibited unless specifically authorized elsewhere in this permit. This requirement is not applicable to products used for lawn and agricultural purposes or to the use of herbicides if used in accordance with labeled instructions and any applicable State permit. The company shall notify the Department in writing no later than six (6) months prior to instituting use of any biocide or chemical (except as authorized elsewhere in this permit) used in the cooling systems or any other portion of the treatment system which may be toxic to aquatic life. Such notification shall include:
- a. Name and general composition of biocide or chemical
 - b. Frequencies of use
 - c. Quantities to be used
 - d. Proposed effluent concentrations
 - e. Acute and/or chronic toxicity data (laboratory reports shall be prepared according to Section 12 of EPA document no. EPA/600/4-90/027 entitled, Methods for Measuring the Acute Toxicity of Effluents a Receiving Waters for Freshwater and Marine Organisms, or most current addition.)
 - f. Product data sheet
 - g. Product label

The Department shall review the above information to determine if a major or minor permit revision is necessary. Permit revisions shall be processed in accordance with the requirements of Chapter 62-620, F.A.C. Discharge associated with the use of such biocide or chemical is not authorized without prior approval by the Department.

7. The permittee shall provide safe access points for obtaining representative samples which are required by this permit.
8. The permittee shall ensure that all laboratory analytical data submitted to the department as required by this permit is from a laboratory which has a currently valid and Department-approved Comprehensive Quality Assurance Plan (ComQAP) [or a ComQAP pending approval] for all parameters being reported as required by Chapter 62-160, Florida Administrative Code.

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9. The discharge of any waste resulting from the combustion of chemical metal cleaning wastes, toxic wastes, or hazardous wastes to any waste stream which ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.
10. No direct discharge from any solid waste storage area to waters of the United States is authorized by this permit without prior approval by the Department.

Additionally, except as specifically permitted, there shall be no point source discharge of the following categories of wastes to waters of the United States or to any waste stream which enters such waters:

a. **Low Volume Wastes**

Includes, but is not limited to, boiler blowdown, wet scrubber air pollution control systems, ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, floor drainage, cooling tower basin cleaning wastes and blowdown from recirculating house service water systems.

b. **Metal Cleaning Wastes**

Any wastewater resulting from cleaning, with or without chemical cleaning compounds, any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning. Wastewater not classified as metal cleaning waste includes wastewater generated from hydrolasing (high pressure water jets) equipment to remove radioactive contaminants, including the reactor cavity, fuel transfer canal and various plant components such as valves, motor parts, and sections of pipe and stainless steel insulation.

11. The permittee is authorized to utilize the following chemical additives in accordance with the conditions of this permit pursuant to sections I.A.3.a.: Boron, Hydrazine, Dimethylamine, Carbohydrazide. Glutaraldehyde, Isothiazolin and Polyglycol are approved for use in the "closed-cooling water" system. If any discharges of these biocides occur to "waters of the US" in other than de minimus amounts where as the active ingredient is a detectable level, the facility shall immediately notify the Department.
12. The permittee shall initiate the series of tests described below, within the fourth year after permit issuance, to evaluate whole effluent toxicity of the discharge from outfall D-001 [formerly (OSN) 001]. All test species, procedures and quality assurance criteria used shall be in accordance with Methods for Measuring Acute Toxicity of Effluents to Freshwater and Marine Organisms, EPA/600/4-90/027F, or the most current edition. The control water and dilution water used will be moderately hard water as described in EPA/600/4-90/027F, Table 6, or the most current edition. A standard reference toxicant quality assurance acute toxicity test shall be conducted concurrently or no greater than 30 days prior to the initiation of each bioassay test with each species used in the toxicity tests. Results of all toxicity tests shall be submitted with the discharge monitoring report (DMR). Any deviation of the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use.
 - a.)
 1. The permittee shall conduct 96-hour acute static renewal toxicity tests using the **mysid shrimp**, **Mysidopsis bahia** and the **silverside minnow**, **Menidia beryllina**. All tests will be conducted on four separate grab samples collected at evenly-spaced (6-hr) intervals over a 24-hour period and used in four separate tests in order to catch any peaks of toxicity and to account for daily variations in effluent quality.
 2. If control mortality exceeds 10% for either species in any test, the test(s) for that species (including the control) shall be repeated. A test will be considered valid only if control mortality does not exceed 10% for either species. If, in any separate grab sample test, 100% mortality occurs prior to the end of the test, and control mortality is less than 10% at that time, that test (including the control) shall be terminated with the conclusion that the sample demonstrates unacceptable acute toxicity.
 - b.)
 1. The toxicity tests specified above shall be initiated during the fourth year after permit issuance during a condenser chlorination application.

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2. Results from "routine" tests shall be reported according to EPA/600/4-90/027F, Section 12, Report Preparation (or the most current edition), and shall be submitted to:

Florida Department of Environmental Protection
Industrial Wastewater Section
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

- c.) 1. Each grab sample shall be run as a separate test and shall be conducted using a control (0% effluent) and one test concentration of 100% final effluent.
2. Mortalities of equal to or greater than 50% in a 100% effluent sample or any LC50 < 100% identified in additional tests will constitute a violation of these permit conditions, and Rule 62-302.200(1), Rule 62-302.500(1)(d) and Rule 62-4.244(3)(a), F. A. C.
- d.) 1. If mortalities of greater than 20% are identified for either test species in any of the *four separate* grab sample tests within the specified time, the Department reserves the right to require additional toxicity testing to determine the source of the observed toxicity.
2. The first additional test shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 50%, 25%, 12.5% and 6.25% effluent and a control (0% effluent). The dilution series may be modified in the second and third test to more accurately identify the toxicity, such that at least two dilutions above and two dilutions below the target toxicity and a control (0% effluent) are run.
3. For each additional test, the sample collection requirements and the test acceptability criteria specified in Section 1 above must be met for the test to be considered valid. The first test shall begin within two weeks of the end of the "routine" tests, and shall be conducted weekly thereafter until *six* additional, valid tests are completed. The additional tests will be used to determine if the toxicity found in the "routine" test is still present.
4. Results from additional tests, required due to unacceptable acute toxicity in the "routine" tests, shall be submitted in a single report prepared according to EPA/600/4-90/027F, Section 12, or the most current edition and submitted within 45 days of completion of the additional, valid test. If the additional test(s) demonstrate unacceptable acute toxicity, the permittee will meet with the Department within 30 days of the report submittal to identify corrective actions necessary to remedy the observed acute toxicity.
13. If any manatee are observed in the intake canal, DEP shall be contacted and actions shall be taken for the safe and expeditious removal of the manatee. Florida Fish & Wildlife Conservation Commission (FWC), Tequesta, Florida shall be contacted at (561) 575-5408.
14. Monitoring requirements specified in Section I.A.1 through I.A.7 of this permit shall begin on the first day of the month following the issuance of this permit.

C. Reopener Clause

1. The permit shall be modified, or alternatively, revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(23)(C) and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act (the Act), as amended, if the effluent standard or limitation so issued or approved:

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- a.) Contains different conditions or is otherwise more stringent than any condition in the permit/or;
- b.) Controls any pollutant not addressed in the permit.

The permit as modified or reissued under this paragraph shall contain any other requirements of the Act then applicable.

2. The permit may be reopened to adjust effluent limitations or monitoring requirements should future wasteload allocation determinations, water quality studies, DEP approved changes in water quality standards, or other information show a need for a different limitation or monitoring requirement.

D. Stormwater to Intake/Discharge Canal from Diked Petroleum Storage or Handling Area

Permittee is authorized to discharge stormwater from diked petroleum storage or handling areas, provided the following conditions are met:

Such discharges shall be limited and monitored by the permittee as specified below:

1. The facility shall have a valid SPCC Plan pursuant to 40 CFR 112.
2. In draining the diked area, a portable oil skimmer or similar device or absorbent material shall be used to remove oil and grease (as indicated by the presence of a sheen) immediately prior to draining.
3. Monitoring records shall be maintained in the form of a log and shall contain the following information, as a minimum:
 - a.) Date and time of discharge,
 - b.) Estimated volume of discharge,
 - c.) Initials of person making visual inspection and authorizing discharge, and
 - d.) Observed conditions of storm water discharged.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of a visible oil sheen at any time.

E. Combined Waste Streams

In the event that waste streams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property attributable to each controlled waste source shall not exceed the specified limitation for that waste source (ref. 40 CFR Section 423.15(k);1974).

F. Definitions

1. **Calendar day** for the purposes of flow and temperature measurement is from midnight to midnight.
2. **Continuous measurement frequency** is defined as measurements taken at intervals of no greater than one hour each, except for TRO, which shall be taken at intervals of no greater than per 10 minutes.
3. **Daily Average Value** is defined as the average of all daily sampling results for a parameter during a reporting period (i.e. month).

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4. **Daily Maximum Concentration** is the maximum concentration of a pollutant discharged during any calendar day of a reporting period (i.e. month).
5. **Day of Discharge** shall be defined as a 24 hour period beginning 12 hours prior to commencement of discharge and hence ending 12 hours after completion of discharge.
6. **Multiple Grabs** shall consist of grab samples collected at the beginning of the period of chlorination discharge, and once every 15 minutes, thereafter. In addition, one grab sample shall be collected at the end of the period of chlorine discharge. The "period of chlorine discharge" refers to all chlorination sessions conducted during a 24-hour period.
7. **Three-hour rolling average** for temperature means the average of the most recent value with those collected over the previous 180 minutes.
8. **Total Residual Oxidants (TRO)** means the value obtained using the amperometric titration method for total residual chlorine. Testing for TRO shall be conducted according to either the amperometric titration method, the DPD colorimetric method, or electrode as specified in Section 4500-C1 E., 4500-C1 G., or 4500-C1 I, respectively, Standard Methods for the Examination of Water and Wastewater, 18th edition (or most current edition).
9. **Free Available Oxidants (FAO)** means the value obtained using the amperometric titration method for free available chlorine. Testing for FAO shall be conducted according to either the amperometric titration method, or DPD colorimetric method as specified in Section 4500-C1 E. or 4500-C1 G., respectively, Standard Methods for the Examination of Water Wastewater, 18th edition (or most current edition).
10. **Fully Operational** shall mean when on-site demineralizer regeneration is eliminated pursuant to the installation and operation of the proposed reverse osmosis system.

G. Condenser Maintenance Program

The permittee is authorized to use the Taprogge condenser tube cleaning system pursuant to the plant's Best Management Practices for control of sponge ball loss to the environment.

H. Burning Toxic and Hazardous Wastes

Discharge of any waste resulting from the combustion of toxic, hazardous, or metal cleaning wastes to any waste stream which ultimately discharges to waters of the state is prohibited, unless specifically authorized elsewhere in this permit.

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II. Industrial Sludge Management Requirements

The disposal of sludge or other solids generated from the facility shall be reused, reclaimed, or otherwise disposed of in accordance with the requirement of Chapter 62-701, F.A.C.

III. Ground Water Monitoring Requirements

This section is not applicable to this facility.

IV. Other Land Application Requirements

This section is not applicable to this facility.

V. Operation and Maintenance Requirements

A. Operation of Treatment and Disposal Facilities

1. The permittee shall ensure that the operation of this facility is as described in the application and supporting documents.
2. The operation of the pollution control facilities described in this permit shall be under the supervision of a person who is qualified by formal training and/or practical experience in the field of water pollution control appropriate for those facilities.

B. Record keeping Requirements:

1. The permittee shall maintain the following records on the site of the permitted facility and make them available for inspection:
 - a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, including, if applicable, a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;
 - b. Copies of all reports, other than those required in items a. and b. of this section, required by the permit for at least three years from the date the report was prepared, unless otherwise specified by Department rule;
 - c. Records of all data, including reports and documents used to complete the application for the permit for at least three years from the date the application was filed, unless otherwise specified by Department rule;
 - d. A copy of the current permit;
 - e. A copy of any required record drawings;
 - f. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from the date on the logs or schedule

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VI. Compliance Schedules and Self-imposed Improvement Schedules

A. Schedule of Compliance

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:
 - a. Attainment of effluent limitations.....Permit issuance
 - b. Best Management Practices (BMP3) Plan (See Part VII, Subpart D)
 - (1) Update plan.....No later than 3 months from the effective date of the permit
 - (2) Implement plan.....On start of discharge
2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by an identified date, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

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VII. Other Specific Conditions

A. Specific Conditions Applicable to all permits

1. Drawings, plans, documents or specifications submitted by the permittee, not attached hereto, but retained on file with the Department, are made a part hereof.
2. If significant historical or archaeological artifacts are discovered at any time within the project site, the permittee shall immediately notify the office specified in Condition 5. and the Bureau of Historic Preservation, Division of Archives, History and Records Management, R.A. Gray Building, Tallahassee, Florida 32301.
3. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.) Florida Statutes, applicable portions of reports to be submitted under this permit, shall be signed and sealed by the professional(s) who prepared them.
4. This permit satisfies industrial wastewater program permitting requirements only and does not authorize operation of this facility prior to obtaining any other permits required by local, state or federal agencies.

B. Duty to Reapply

1. The permittee shall submit an application to renew this permit at least 180 days before the expiration date of this permit.
2. The permittee shall apply on the appropriate form listed in Rule 62-620.910, F.A.C., and in the manner established in Rules 62-620.400 through 62-620.460, F.A.C., including submittal of the appropriate processing fee set forth in Rule 62-4.050, F.A.C.
3. An application filed in accordance with subsections 1. and 2. of this part shall be considered timely. When an application for renewal of a permit is timely and sufficient, the existing permit shall not expire until the Department has taken final action on the application for renewal or until the last day for seeking judicial review of the agency order or a later date fixed by order of the reviewing court.
4. The late submittal of a renewal application shall be considered timely and sufficient for the purpose of extending the effectiveness of the expiring permit only if it is submitted and made complete before the expiration date.

C. Specific Conditions Related to Best Management Practices Condition

1. Best Management Practices Plan:

In accordance with Rule 62-620.620(1)(n), the permittee shall develop and implement a Best Management Practices plan incorporating pollution prevention measures. References which may be used in developing the plan are "Criteria and Standards for Best Management Practices Authorized Under Section 304(e) of the Act", found at 40 CFR Section 122.44(k), the Storm Water Management Industrial Activities Guidance Manual, EPA/833-R92-002 and other EPA documents relating to Best Management Practice guidance.

2. Definitions:

- a. The term "pollutants" refers to conventional, non-conventional and toxic pollutants, as appropriate for the NPDES storm water program and toxic pollutants.

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- b. Conventional pollutants are: biochemical oxygen demand (BOD), suspended solids, pH, fecal coliform bacteria and oil & grease.
 - c. Non-conventional pollutants are those which are not defined as conventional or toxic, such as phosphorus, nitrogen or ammonia. (Ref: 40 CFR Part 122, Appendix D, Table IV)
 - d. For purposes of this part, Toxic pollutants include, but are not limited to: a) any toxic substance listed in Section 307(a)(1) of the CWA, any hazardous substance listed in Section 311 of the CWA, and b) any substance (that is not also a conventional or non-conventional pollutant) for which EPA has published an acute or chronic toxicity criterion, or that is a pesticide regulated by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).
 - e. "Pollution prevention" refers to the first category of EPA's preferred hazardous waste management strategy - source reduction.
 - f. "Significant Materials" is defined as raw materials; fuels; materials such as solvents and detergents; hazardous substances designated under Section 101(14) of CERCLA; and any chemical the facility is required to report pursuant to EPCRA, Section 313; fertilizers; pesticides; and waste products such as ashes, slag and sludge.
 - g. "Source reduction" means any practice which: i) reduces the amount of any pollutant entering a waste stream prior to recycling, treatment or disposal; and ii) reduces the hazards to public health and the environment associated with the release of such pollutant. The term includes equipment or technology modifications, process or procedure modifications, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control. It does not include any practice which alters the physical, chemical, or biological characteristics or the volume of a pollutant through a process or activity which itself is not integral to, or previously considered necessary for, the production of a product or the providing of a service.
 - h. "BMP3" means a Best Management Plan incorporating the requirements of 40 CFR § 125, Subpart K, plus pollution prevention techniques, except where other existing programs are deemed equivalent by the permittee. The permittee shall certify the equivalency of the other referenced programs.
 - i. "Reportable Quantity (RQ) Discharge" A RQ release occurs when a quantity of a hazardous substance or oil is spilled or released within a 24-hour period of time and exceeds the RQ level assigned to that substance under CERCLA or the Clean Water Act. These levels or quantities are defined in terms of gallons or pounds. Regulations listing these quantities are contained at 40 CFR 302.4, 40 CFR 117.21 and 40 CFR 110.
 - j. The term "material" refers to chemicals or chemical products used in any plant operation (i.e., caustic soda, hydrazine, degreasing agents, paint solvents, etc.). It does not include lumber, boxes, packing materials, etc.
3. Best Management Practices/Pollution Prevention Plan:

The permittee shall develop and implement a BMP3 plan for the facility which is the source of wastewater and storm water discharges. The plan shall be directed toward reducing those pollutants of concern which discharge, or could discharge, to surface waters to and shall be prepared in accordance with good engineering

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ST. LUCIE UNITS 1 & 2

PERMITTEE:
Florida Power & Light
St. Lucie Power Plant
Unit 1 & 2
6501 S. Ocean Drive
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PERMIT NUMBER: FL0002208
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and good housekeeping practices. For the purposes of this permit, pollutants of concern shall be limited to toxic pollutants and significant materials, as defined above, known to the discharger. The plan shall address all activities which could or do contribute these pollutants to the surface water discharge, including storm water, water and waste treatment, and plant ancillary activities.

In addition, the BMP3 plan shall include procedures to be implemented by the facility to minimize and monitor losses that may occur during operation of the condenser tube cleaning system. At a minimum, the plan shall include provisions for:

- a) Cleaning device losses and recovery for each cleaning event.
- b) Replacement of worn cleaning devices.
- c) Cleaning device losses shall be reported to NMFS and DEP-BPSM on an annual basis.

The above documentation shall be kept on file at the facility for a minimum of at least three years from the date of preparation pursuant to Section V.B.1.

4. Signatory Authority & Management Responsibilities:

A copy of the BMP3 plan shall be retained at the facility and shall be made available to the permit issuing authority upon request.

The BMP3 plan shall contain a written statement from corporate or plant management indicating management's commitment to the goals of the BMP3 program. The BMP3 plan shall be signed and reviewed by the plant management.

5. BMP3 Plan Requirements:

The following requirements may be incorporated by reference from existing facility procedures:

- a. Name and description of facility
- b. A site map - At a minimum the site map must include information of the following: discharge points ("outfalls"); drainage patterns; identification of the types of pollutants likely to be discharged from each drainage area; direction of flow; surface water bodies, including any proximate stream, river, lake, or other waterbody receiving storm water discharge from the site; structural control measures (physically constructed features used to control storm water flows); locations of "significant materials" exposed to storm water; locations of industrial activities (such as fueling stations, loading and unloading areas, vehicle or equipment maintenance areas, waste disposal areas, storage areas).
- c. A materials inventory including the types of materials that are handled, stored, or processed onsite, particularly significant materials. To complete the materials inventory, the permittee must list materials that have been exposed to storm water in the past 3 years (focus on areas where materials are stored, processed, transported, or transferred and provide a narrative description of methods and location of storage and disposal areas, materials management practices, treatment practices, and any structural/nonstructural control measures.

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- d. A list of significant spills and leaks of toxic or hazardous materials that have occurred in the past 3 years. "Significant spills" includes releases in excess of reportable quantities.
- e. A summary of any existing storm water sampling data and a description of the sample collection procedures used.
- f. A site evaluation summary - The Site Evaluation Summary should provide a narrative description of activities with a high potential to contaminate storm water at the site, including those associated with materials loading and unloading, outdoor storage, outdoor manufacturing or processing, onsite disposal, and significant dust or particulate generating activities. The summary should also include a description of any pollutants of concern that may be associated with such activities.
- g. A narrative description of the following BMP's:
 - (i) - Good Housekeeping Practices
 - (ii) - Preventive Maintenance The permittee must develop a preventive maintenance program that involves inspections and maintenance of storm water management devices and routine inspections of facility operations to detect faulty equipment. Equipment (such as tanks, containers, and drums) should be checked regularly for signs of deterioration.
 - (iii) - Visual Inspections Regular inspections shall be performed by qualified, trained plant personnel. Reports shall note when inspections were done, the name of the person who conducted the inspection, which areas were inspected, what problems were found, and what steps were taken to correct any problems.
 - (iv) - Spill Prevention and Responses Areas where spills are likely to occur and their drainage points must be clearly identified in the BMP3 plan. Employees shall be made aware of response procedures, including material handling and storage requirements, and should have access to appropriate cleanup equipment.
 - (v) - Sediment and Erosion Control The BMP3 must identify activities that present a potential for significant soil erosion and measures taken to control such erosion.
 - (vi) - Management of Runoff The permittee must describe existing storm water controls found at the facility and any additional measures that can be implemented to improve the prevention and control of polluted storm water. Examples include: vegetative swales, reuse of collected storm water, infiltration trenches, and detention ponds.

6. Best Management Practices & Pollution Prevention Committee:

A Best Management Practices Committee (Committee) should be established to direct or assist in the implementation of the BMP3 plan. The Committee should be comprised of individuals within the plant organization who are responsible for developing, implementing, monitoring of success, and revision of the BMP3 plan. The activities and responsibilities of the Committee should address all aspects of the facility's BMP3 plan. The scope of responsibilities of the Committee should be described in the plan.

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7. Employee Training:

Employee training programs shall inform appropriate personnel of the components & goals of the BMP3 plan and shall describe employee responsibilities for implementing the plan. Training shall address topics such as good housekeeping, materials management, recordkeeping and reporting, spill prevention & response, as well as specific waste reduction practices to be employed. The plan shall identify periodic dates for such training.

8. Plan Development & Implementation:

The BMP3 plan shall be developed or updated 6 months prior to commercial operation and implemented upon commercial operation, unless any later dates are specified by the Department.

9. Plan Review & Modification:

If following review by the Permit Issuing Authority, or authorized representative, the BMP3 plan is determined insufficient, he/she may notify the permittee that the BMP3 plan does not meet one or more of the minimum requirements of this Part. Upon such notification from the Permit Issuing Authority, or authorized representative, the permittee shall amend the plan and shall submit to the Permit Issuing Authority a written certification that the requested changes have been made. Unless otherwise provided by the Permit Issuing Authority, the permittee shall have 30 days after such notification to make the changes necessary.

The permittee shall modify the BMP3 plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the State or if the plan proves to be ineffective in achieving the general objectives of reducing pollutants in wastewater or storm water discharges. Modifications to the plan may be reviewed by Permit Issuing Authority in the same manner as described above.

10. Annual Site Compliance Evaluation:

Qualified personnel must conduct site compliance evaluations at appropriate intervals, but at least once a year. Compliance evaluations shall include:

- inspection of storm water drainage areas for evidence of pollutants entering the drainage system;
- evaluation of the effectiveness of BMP's;
- observations of structural measures, sediment controls, and other storm water BMP's to ensure proper operation;
- revision of the plan as needed within 2 weeks of the inspection, and implementation of any necessary changes within 12 weeks of the inspection; and
- preparation of a report summarizing inspection results and follow-up actions, identifying the date of inspection and personnel who conducted the inspection.

The inspection report shall be signed by the plant environmental engineering staff and plant management and kept with the BMP3 plan.

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11. Recordkeeping and Internal Reporting:

For at least one year after the expiration of this permit, the permittee shall record and maintain records of spills, leaks, inspections, and maintenance activities. For spills and leaks, records should include information such as the date and time of the incident, weather conditions, cause, and resulting environmental problems.

D. Specific Conditions Related to Existing Manufacturing, Commercial, Mining, and Silviculture Wastewater Facilities or Activities

1. Existing manufacturing, commercial, mining, and silvicultural wastewater facilities or activities that discharge into surface waters shall notify the Department as soon as they know or have reason to believe:
[62-620.624(1)]
 - (a) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels
 - (1) One hundred micrograms per liter,
 - (2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony, or
 - (3) Five times the maximum concentration value reported for that pollutant in the permit application.
 - (b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels
 - (1) Five hundred micrograms per liter,
 - (2) One milligram per liter for antimony, or
 - (3) Ten times the maximum concentration value reported for that pollutant in the permit application.

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VIII. General Conditions

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, Florida Statutes. Any permit noncompliance constitutes a violation of Chapter 403, Florida Statutes, and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. [62-620.610(1)]
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviations from the approved drawings, exhibits, specifications or conditions of this permit constitutes grounds for revocation and enforcement action by the Department. [62-620.610(2)]
3. As provided in Subsection 403.087(6), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. [62-620.610(3)]
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. [62-620.610(4)]
5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. [62-620.610(5)]
6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. [62-620.610(6)]
7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. [62-620.610(7)]
8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [62-620.610(8)]

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9. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to
 - a. Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under the conditions of this permit;
 - b. Have access to and copy any records that shall be kept under the conditions of this permit;
 - c. Inspect the facilities, equipment, practices, or operations regulated or required under this permit; and
 - d. Sample or monitor any substances or parameters at any location necessary to assure compliance with this permit or Department rules.
[62-620.610(9)]
10. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data, and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except as such use is proscribed by Section 403.111, Florida Statutes, or Rule 62-620.302, Florida Administrative Code. Such evidence shall only be used to the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules.
[62-620.610(10)]
11. When requested by the Department, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also provide to the Department upon request copies of records required by this permit to be kept. If the permittee becomes aware of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be promptly submitted or corrections promptly reported to the Department. [62-620.610(11)]
12. Unless specifically stated otherwise in Department rules, the permittee, in accepting this permit, agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard. [62-620.610(12)]
13. The permittee, in accepting this permit, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C. [62-620.610(13)]
14. This permit is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department. [62-620.610(14)]
15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. [62-620.610(15)]

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16. The permittee shall apply for a revision to the Department permit in accordance with Rules 62-620.300, 62.420 or 62.620.450, F.A.C., as applicable, at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with Rule 62-620.300 for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in Rule 62-620.300, F.A.C. [62-620.610(16)]
17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The permittee shall be responsible for any and all damages which may result from the changes and may be subject to enforcement action by the Department for penalties or revocation of this permit. The notice shall include the following information:
 - a. A description of the anticipated noncompliance;
 - b. The period of the anticipated noncompliance, including dates and times; and
 - c. Steps being taken to prevent future occurrence of the noncompliance.
[62-620.610(17)]
18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246, Chapter 62-160 and 62-601, F.A.C., and 40 CFR 136, as appropriate.
 - a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10).
 - b. If the permittee monitors any contaminate more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
 - c. Calculations for all limitations which require averaging of measurements shall use an arithmetic mean unless otherwise specified in this permit.
 - d. Any laboratory test required by this permit for domestic wastewater facilities shall be performed by a laboratory that has been certified by the Department of Health and Rehabilitative Services (DHRS) under Chapter 10D41, F.A.C., to perform the test. In domestic wastewater facilities, on-site tests for dissolved oxygen, pH, and total chlorine residual shall be performed by a laboratory certified to test for those parameters or under the direction of an operator certified under Chapter 61E12-41, F.A.C.
 - e. Under Chapter 62-160, F.A.C., sample collection shall be performed by following the protocols outlined in "DER Standard Operating Procedures for Laboratory Operations and Sample Collection Activities" (DER-QA-001/92). Alternatively, sample collection may be performed by an organization who has an approved Comprehensive Quality Assurance Plan (CompQAP) on file with the Department. The CompQAP shall be approved for collection of samples from the required matrices and for the required tests.
[62-620.610(18)]
19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this permit shall be submitted no later than 14 days following each schedule date. [62-620.610(19)]
20. The permittee shall report to the Department any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

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- a. The following shall be included as information which must be reported within 24 hours under this condition:
 - (1). Any unanticipated bypass which causes any reclaimed water or the effluent to exceed any permit limitation or results in an unpermitted discharge,
 - (2). Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,
 - (3). Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and
 - (4). Any unauthorized discharge to surface or ground waters.
 - b. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department shall waive the written report.
[62-620.610(20)]
21. The permittee shall report all instances of noncompliance not reported under Conditions VIII. 18. and 19. of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Condition VIII. 20. of this permit. [62-620.610(21)]
22. Bypass Provisions.
- a. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless the permittee affirmatively demonstrates that:
 - (1). Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
 - (2). There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime.
This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (3). The permittee submitted notices as required under Condition VIII. 22. b. of this permit.
 - b. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Condition VIII. 20. of this permit. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.
 - c. The Department shall approve an anticipated bypass, after considering its adverse effect, if the permittee demonstrates that it will meet the three conditions listed in Condition VIII. 22. a. 1. through 3. of this permit.
 - d. A permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of Condition VIII. 22. a. through c. of this permit.
[62-620.610(22)]

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23. Upset Provisions

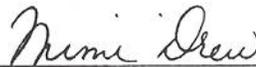
- a. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:
 - (1). An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2). The permitted facility was at the time being properly operated;
 - (3). The permittee submitted notice of the upset as required in Condition VIII. 20. of this permit; and
 - (4). The permittee complied with any remedial measures required under Condition VIII. 5. of this permit.

- b. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

- c. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review. [62-620.610(23)]

Executed in Tallahassee, Florida.

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL PROTECTION



Mimi Drew
Director
Division of Water Resource Management

2600 Blair Stone Road
Tallahassee, FL 32399-2400
(850) 487-1855

LICENSE RENEWAL APPLICATION
ST. LUCIE UNITS 1 & 2

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

AMENDMENT TO THE FACT SHEET FOR
PERMIT TO DISCHARGE TREATED WASTEWATER
TO WATERS OF THE STATE

Permit Number: FL0002208
Permit Writer: Wanda Parker-Garvin

Application Date: April 9, 1996

1. SYNOPSIS OF APPLICATION

A. Name and Address of Applicant

Florida Power & Light Company
6501 S. Ocean Drive
Jensen Beach, Florida 34957

For:

St. Lucie Power Plant
Units 1 and 2
Hutchinson Island
St. Lucie County, Florida

2. EPA Comments

None received.

3. Public Comments

None received.

4. Other Comments Received

Changes made to the draft permit after Notice of Draft Issuance:

- a) Section I.A.1.a., page 2: The parameter for biocide was deleted pursuant to supporting documentation provided by the facility which states that FPL no longer intends to discharge biocides other than chlorine. An additional requirement was included in specific condition I.B.11. if any discharges of these biocides occur to "waters of the US" in other than de minimus amounts where as the active ingredient is a detectable level.
- b) Section I.A.2., page 4 of the draft permit: Outfall 002 was deleted because the facility provided supporting documentation that FPL no longer intends to discharge low volume wastewater from the neutralization basin to the intake canal. Future discharges from the neutralization basin will be directed to the evaporation/percolation pond system.
- c) Section I.A.5., page 6: The sample type for Dimethylamine and Carbonylhydrazide was changed from grab to calculation. Additional calculations for the aforementioned were added as footnotes.
- d) Section I.A.8.d., page 9: A specific requirement was added referencing monitoring applicability for outfall I-008.

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FPL–St. Lucie Plant – FL0002208
Fact Sheet

- e) Section I.B.11., page 12: The language was changed to clarify the specific requirement and amend the changes made in item c) of this fact sheet.
- f) Section I.B.12., page 12: The measurement frequency was changed from “the third and fifth year” to the “fourth year” .

Changes made to the fact sheet after Notice of Draft Issuance:

- a) Additional language was added to the fact sheet referencing the facility’s 316(a) and (b) issues.

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FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

FACT SHEET FOR APPLICATION FOR
PERMIT TO DISCHARGE TREATED WASTEWATER
TO WATERS OF THE STATE

Permit Number: FL0002208
Permit Writer: Wanda Parker-Garvin

Application Date: April 9, 1996
Application No: FL0002208-001-IW1S
Additional Information: April 30, 1999/June 8, 1999
Designation: Major

1. SYNOPSIS OF APPLICATION

A. Name and Address of Applicant

Florida Power & Light Company
6501 S. Ocean Drive
Jensen Beach, Florida 34957

For:

St. Lucie Power Plant
Units 1 and 2
Hutchinson Island
St. Lucie County, Florida

B. Description of Applicant's Operation

The Standard Industrial Classification (SIC) code is 4911 which covers generation, transmission, and distribution of electricity. The St. Lucie plant is located on Hutchinson Island in St. Lucie County, approximately twelve miles north of Stuart, Florida. The plant covers 1,132 acres and is at about midpoint of Hutchinson Island. The plant is a two unit nuclear powered steam electric plant. Each unit is nominally rated at 850 MW. The commercial operation of Unit 1 began in March 1976 and Unit 2 began in May 1983.

C. Design Capacity of Facility

Number of Units - 2
Unit 1 Nameplate Rating - 850 MW
Unit 2 Nameplate Rating - 850 MW

D. Applicant's Receiving Waters: Atlantic Ocean @ D-001 (formerly OSN 001) POD
27° 21' 05" - Latitude 80° 14' 26" - Longitude
Classification: Class III Open Marine Waters
Use Designation: Suitable for Recreation, Propagation, and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife.
(For a sketch showing the location of the discharges see Attachment A)

LICENSE RENEWAL APPLICATION ST. LUCIE UNITS 1 & 2

St. Lucie Power Plant – FL0002208
Fact Sheet

E. Description of Wastewater Treatment Facilities

Once-Through Cooling Water and Auxiliary Cooling Water - D-001 (formerly OSN 001)

The plant utilizes a total of eight circulating water pumps (four per unit) having a nominal total capacity of 968,000 gpm to supply once-through cooling water to Units 1 and 2. The once-through condenser and auxiliary cooling water systems discharge through pipelines into the Atlantic Ocean. Unit 1 discharge pipe utilizes a Y-port diffuser which discharges approximately 1500 feet from shore. Unit 2 utilizes a multi-port diffuser designed with 58 ports, each port being about 16 inches in diameter. The length of the multi-port diffuser is 1,416 feet beginning 1959 feet from shore. The discharge of heated water through the Y-port and multi-port diffusers ensures distribution over a wide area and enables a more rapid and efficient mixing with ambient waters.

Two additional minor effluent streams into the discharge canal are from the steam generators, with monitoring for boron at the point of discharge (POD) and the refueling water storage tank/non-aerated water hold-up tanks. The tanks are normally treated by the liquid radwaste system for further reduction of radioactivity. The refueling water storage tank, whose contents are used for safety injection and refueling water, contains 5000,000 gallons of water with a 2000 ppm boron content. There are four, forty thousand gallon non-aerated water hold-up tanks which hold reactor coolant bleed-off or drain down water. Both of which discharge very infrequently. The once-through cooling water system is presently chlorinated at a maximum of two hours per day per unit for micro- and acrobiofouling control.

As a replacement for the biocide treatment, FPL utilizes mechanical condenser tube cleaning systems on both units. These systems utilize sponge balls that are about 23 mm in diameter, which are forced through the condenser tubes. Approximately 1800 sponge balls are utilized at one time per condenser waterbox. There are four waterboxes per condenser on each unit. The sponge balls scrub the tubes as they pass through and downstream of the condensers, the sponge balls are captured by a ball strainer.

In addition to once-through cooling, up to 58,000 gpm of ocean cooling water is pumped using auxiliary cooling water pumps through the auxiliary equipment heat exchangers. The solution being cooled by these heat exchangers contain 200-500 ppm of sodium molybdate, 200-500 ppm of sodium nitrate and 10-30 ppm of tolytriazole. Low-level chlorination of the auxiliary cooling water is utilized.

Liquid Radwaste System Batch Releases – I-003 (formerly OSN 003)

The flow from the radwaste treatment system is intermittent. The system has been modified to permit a maximum estimated flow of 259 gpm. The waste stream originates from various maintenance and operational activities which take place in the reactor auxiliary building (RAB) and is processed for radioactive reduction by ion exchange resins and low micron filtration systems.

Steam Generator Blowdown – I-005 (formerly OSN 005)

High purity make-up water is routed to the secondary system and steam generators as makeup for the water/steam cycle. Ammonium hydroxide is added for pH control and catalyzed hydrazine (Amerzine) is added for oxygen removal. The blowdown is either recovered or routed to the discharge canal. The concentration of hydrazine in these discharges during plant operation normally ranges from 25 ppb to 2 ppm.

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Intake Traveling Screen Wash Water – I-007 (formerly OSN 007)

Two 1060 gpm capacity traveling screen wash pumps located on both Units 1 and 2 at the intake structure withdraw ocean water for traveling screen cleaning. The traveling screens are used to prevent debris from reaching the condensers. One pump is normally in operation on each unit for two hours per day, at an average wash flow of 90 gpm per unit. The wash water is returned to the intake canal through a collection sump and drain system.

Non-equipment Area Storm Water Run-off – I-06B and I-06C (formerly OSN 006B and OSN 006C)

Two non-equipment area stormwater discharges are made to the cooling water intake canal or mangrove impoundments. These streams originate from areas of the plant including roadways, parking lots, and building storm drains.

Evaporation/Percolation Basin – I-008

This new discharge from the Southeast Evaporation/Percolation Basin to the plant intake canal is to be used when local rainfall amounts result in pond levels that impend plant operating equipment. The discharge is to be utilized via a staff gauge located in the basin and opened for discharge when necessary. Historical data indicates the discharge would occur approximately twice a year.

F. Description of Discharges (as reported by the applicant)

D-001 (formerly outfall 001) - Once-through cooling water for Unit 1 & 2

Maximum Daily flow, MGD	1477
pH range, SU	8.09-8.11
Daily Maximum Temp., °C(Winter)	35.6
Daily Maximum Temp., °C(Summer)	44.4

I-003 (formerly outfall 003) - Liquid radiation waste

Maximum Daily flow, MGD	0.040
pH range, SU	5.73 - 5.73
Daily Maximum Temp., °C (Winter)	21.0

I-005 (formerly outfall 005) - Steam generator blowdown

Maximum Daily flow, MGD	0.509
pH range, SU	7.59 - 10.05
Daily Maximum Temp., °C (Winter)	48.9

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2. PROPOSED EFFLUENT LIMITATIONS

- A. **Outfall D-001 [formerly (OSN) 001] - Condenser once through cooling water and auxiliary equipment cooling water**

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS
	Instantaneous Maximum
Flow, MGD	Report
Discharge Temperature, °F	113 ^{1, 2}
Temperature Rise, °F	30 ^{1, 2, 2}
Total Residual Oxidants (TRO), mg/l	0.10 (See item b.)
Time of Condenser Chlorine Addition, minutes/day/unit	120
Free Available Oxidants, mg/l	0.5 (See item b.)
Toxicity (Acute)	(See section I:B:12)

- b. Free available oxidants (FAO) shall not exceed an average concentration of 0.2 mg/l and maximum instantaneous concentration of 0.5 mg/l at the outlet corresponding to an individual condenser during any chlorination period. Neither FAO nor total residual oxidants (TRO) may be discharged from either unit condensers for more than two hours in any one day and not more than one unit may discharge FAO or TRO from its condensers at any one time. Additionally, TRO shall not exceed a maximum instantaneous concentration of 0.10 mg/l at any one time as measured at the POD prior to discharge to the Atlantic Ocean. Auxiliary equipment cooling water may receive continuous low-level chlorination.

¹ At the point of discharge, the heated water temperature from the diffusers shall not exceed 113°F or 30°F above ambient at any time except that the maximum discharge temperature shall be limited to 117°F or 32°F above ambient during condenser and/or circulating water pump maintenance, throttling circulating water pumps to minimize use of chlorine, and/or fouling of circulating water system. This temperature may be measured at a point within the discharge canal. (In determining the temperature differential, the time of travel through the plant may be considered). In the event that discharge temperature exceeds 113°F the permittee shall notify the Department within 5 days.

² The ambient ocean surface temperature shall not exceed 97°F as an instantaneous maximum at any point.

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B. Outfall I-003 [formerly (OSN) 003] - Liquid radiation waste

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS	
	Daily Average	Daily Maximum
Flow, MGD	Report	Report
Oil and Grease, mg/l	15.0	20.0
Total Suspended Solids, mg/l	30.0	100.0

D. Outfall I-005 [formerly (OSN) 005] - Steam generator blowdown

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS	
	Daily Average	Daily Maximum
Intake Flow, MGD	Report	Report
Oil and Grease, mg/l	15.0	20.0
Total Suspended Solids, mg/l	30.0	100.0
Boron, mg/l	-----	4.0
Hydrazine, mg/l	-----	0.30
Dimethylamine, mg/l	-----	Report
Carbohydrazide, mg/l	-----	Report

E. Outfall I-06B [formerly (OSN) 006B] – Former Oil storage area

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS	
	Daily Average	Daily Maximum
Flow, MGD	Report	Report
Total Suspended Solids, mg/l	Report	Report
Oil and Grease, mg/l	Report	Report

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F. **Outfall I-06C [formerly (OSN) 006C] - Non-industrial related storm water**

DISCHARGE LIMITATIONS		
EFFLUENT CHARACTERISTIC	Daily Average	Daily Maximum
Flow, MGD	Report	Report
Oil and Grease, mg/l	Report	

G. **Outfall I-007 [formerly (OSN) 007] - Intake screen wash water**

- a. Discharge of intake screen wash water is permitted without limitations or monitoring requirements.
- b. There shall be no discharge of floating or visible foam or oil sheen in such amounts as to create a nuisance, nor shall the effluent cause a visible sheen on the receiving waterbody (i.e., discharge canal).

H. **Outfall I-008 – Evaporation Percolation Ponds - Industrial related storm water**

DISCHARGE LIMITATIONS		
EFFLUENT CHARACTERISTIC	Daily Average	Daily Maximum
Flow, MGD	Report	Report
Total Suspended Solids, mg/l	30.0	100.0
Oil and Grease, mg/l	15.0	20.0

3. BASIS FOR EFFLUENT LIMITATIONS AND PERMIT CONDITIONS

The majority of the effluent limitations and conditions for permitting contained in Part I of the permit are continuations of those provisions in the previous NPDES permit. These conditions were made in accordance with the following regulations and determinations:

- A. Federal effluent guidelines for the steam electric power generating point source category (40 CFR Part 423, November 19, 1982, 47 FR ³ 52290), New Source Performance Standards (§ 423.15). A best professional judgment (BPJ) has been made that concentration limitations will be used in lieu of mass limitations in accordance with 40 CFR § 423.15(m). All measurement frequency and sample type requirements are based on BPJ. A limitation on pH range of 6.0 standard units minimum and 9.0 maximum has been proposed in accordance with 40 CFR § 423.15(a), except when limited for direct

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discharge. For direct discharge, the pH range is limited to 6.0 to 8.5 in accordance with FAC⁴ Section 62-302.560(21).

Where necessary, limitations and monitoring requirements have been established for internal waste streams (e.g., wastes which combine with other contaminated wastes or cooling water prior to discharge) in accordance with 40 CFR §122.45(h). Unless otherwise noted, the reason for designating internal waste streams is that the required pollutant concentration limitations cannot be monitored after combination, due to dilution.

- B. Florida Water Quality Standards: The receiving waters are classified as Surface Waters, Class III Waters Recreation, Propagation, and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife (FAC Chapters 62-301 and 62-302).

Requirements for toxic pollutants are provided in FAC Sections 62-302.200, 62-302.500, and 62-302.560. "All surface waters of the State shall at all places and at all times be free from domestic, industrial, agricultural, or other man-induced non-thermal components of discharges which, alone or in combination with other substances or in combination with other components of discharges (whether thermal or non-thermal) are acutely toxic [Section 62-302.500(1)(d)]." "Acute Toxicity" is defined in Section 62-302.200(1) as: "the presence of one or more substances or characteristics or components of substances in amounts which: (a) are greater than one-third (1/3) of the amount lethal to 50% of the test organisms in 96 hours (96 hr LC50) where the 96 hr LC50 is the lowest value which has been determined for a species significant to the indigenous aquatic community; or (b) may reasonably be expected, based upon evaluation by generally accepted scientific methods, to produce effects equal to those of the concentration of the substance specified in (a) above." Criteria for specific pollutants are contained in Section 62-302.530.

- C. Specific citations of the regulations and other rationale for the limitations and conditions for each outfall authorized by this permit are as follows:

- l) Part I.A. Conditions:

D-001 [formerly (OSN) 001] - Condenser once through and auxiliary equipment cooling water

Flow

Monitoring and reporting requirements are based on BPJ, and are consistent with §308(a) of the CWA.

Discharge Temperature

Monitoring and reporting requirements are based on BPJ, supporting historical data and previous thermal studies conducted at the facility.

The thermal component of the discharge is subject to compliance with Florida Water Quality Standards. FAC Section 62-302.520 provides that heated water discharges "shall not increase the temperature of the RBW [receiving body of water] so as to cause substantial damage or harm to the aquatic life or vegetation therein or interfere with the beneficial uses assigned to the RBW."

Section 316(a) Clean Water Act allows the Regional Administrator to impose alternative and less stringent thermal limitations after demonstration that the water quality standards limitations are more stringent than

⁴

FAC - Florida Administrative Code

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necessary to assure the protection and propagation of a balanced, indigenous population of the shellfish fish and wildlife in an on the RBW. It was previously determined that the thermal component of this discharge meets Florida Water Quality Standards. (The temperature limitations included in this permit are supported by previous biological studies which can be found in the administrative record.) Therefore, Section 316(a) was determined not to be applicable. At the time of this writing, there have been no reported changes by the permittee, in the operation of the plant or changes in the biotic community of the RBW which would change the previous determinations.

Section 316(b) of the Clean Water Act requires that the location, design, construction, and capacity of a cooling water intake structure reflect the best technology available for minimizing environmental impacts. Through deliberations between FPL and several government agencies, it was determined that the intake structure met the requirements of Section 316 (b). (See the August 15, 1981 and January 29, 1982 Findings of Facts in the administrative file.)

Total Residual Oxidants

Based on FAC Section 62-302.560(19).

Toxicity

Monitoring and reporting requirements are based on toxicity tests and chemical data provided by the facility.

I-003 [formerly (OSN) 003] - Liquid radiation waste

Flow

Monitoring and reporting requirements are based on BPJ, and are consistent with §308(a) of the CWA.

Oil and Grease and Total Suspended Solids

Based on 40 CFR Section 423.12(b)(5) for low volume wastes.

pH

Based on 40 CFR Section 423.12(b)(1).

I-005 [formerly (OSN) 005] - Steam generator blowdown

Flow

Monitoring and reporting requirements are based on BPJ, and are consistent with §308(a) of the CWA.

Oil and Grease and Total Suspended Solids

Based on 40 CFR Section 423.12(b)(5) for low volume wastes.

Boron, Hydrazine, Dimethylamine, and Carbohydrazide

Monitoring and reporting requirements are based on BPJ and current/historical chemical data provided by the facility.

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I-06B [formerly (OSN) 006B] – Former Oil storage area

Flow

Monitoring and reporting requirements are based on BPJ, and are consistent with §308(a) of the CWA.

Oil and Grease and Total Suspended Solids

Based on 40 CFR Section 423.12(b)(5) for low volume wastes.

I-06C [formerly (OSN) 006C] - Non-industrial related storm water

Flow

Monitoring and reporting requirements are based on BPJ, and are consistent with §308(a) of the CWA.

Oil and Grease

Based on FAC Section 62-302.530(50)(b).

I-008 - industrial related storm water

Flow

Monitoring and reporting requirements are based on BPJ.

Oil and Grease and Total Suspended Solids

- 2) Part I.B. Conditions:
- a) Condition 1. The requirement is based on 62-160, F.A.C.
 - b) Condition 2. and 3. Reporting requirements are standard for a major industrial discharger.
 - c) Condition 5. PCB prohibition as required by 40 CFR 423.12(b)(2) and 40 CFR 423.13(a).
 - d) Condition 6. FIFRA and Toxic Compound prohibitions are based on BPJ and the absence of a request for discharge in the application. These compounds may be highly toxic and any proposed discharge would require assessment and possible inclusion of an effluent limitation to insure that toxicity did not occur.

The remaining conditions are included per best professional judgment of the permit writer, consistency with requirements in the previous NPDES permit, and standard requirements for each NPDES permit.

4. REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

The applicant did not make a request.

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5. EFFECTIVE DATE OF PROPOSED EFFLUENT LIMITATIONS AND COMPLIANCE SCHEDULE

- a. Attainment of effluent limitations.....Permit issuance
- b. Best Management Practices (BMP3) Plan (See Part VII, Subpart D)
 - (1) Update plan.....No later than 3 months from the effective date of the permit
 - (2) Implement plan.....On start of discharge

6. PRINCIPAL CHANGES FROM THE EXISTING PERMIT TO THE DRAFT PERMIT

The permit incorporates a request by the applicant of the following:

- a. Authorization for use of the following new and existing chemical additives at outfall D-001 and I-005: Boron, Hydrazine, Dimethylamine, Carbohydrazide, Glutaraldehyde, Isothiazolin and Polyglycol.
- b. Deletion of the limitations and monitoring requirements of copper and iron for outfall I-005 (formerly (OSN) 005). The parameters were deleted pursuant to historical monitoring data and supporting documentation provided by the facility which demonstrated compliance and no adverse affect to the environment.
- c. Authorization to add a discharge outfall (outfall I-008) from the Southeast Evaporation/Percolation Basin to the plant intake canal.

The permit incorporates changes made by the permit writer based on historical data provided by the facility and best professional judgment of the following:

- a. Deletion of the limitations and monitoring for boron at outfall D-001. The change was made because boron is monitored at the internal outfall I-005 for the same limitation.
- b. Deletion of the limitations and monitoring for copper, iron, and phosphorus at outfall I-003. The parameters were deleted pursuant to historical monitoring data and supporting documentation provided by the facility which demonstrated compliance and no adverse affect to the environment.
- c. Deletion of outfall 004 because the facility is currently connected to the municipal sewage treatment plant.
- d. Deletion of the limitations and monitoring requirements of biocides at outfall D-001. The parameters were deleted pursuant to supporting documentation provided by the facility which states that FPL no longer intends to discharge biocides other than chlorine. An additional requirement was included in specific condition I.B.11. if any discharges of these biocides occur to “waters of the US” in other than deminimus amounts where as the active ingredient is a detectable level.
- e. Deletion of outfall 002 because the facility provided supporting documentation that FPL no longer intends to discharge low volume wastewater from the neutralization basin to the intake canal. Future discharges from the neutralization basin will be directed to the evaporation/percolation pond system.

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7. FDEP CONTACT

Additional information concerning the permit may be obtained by Wanda Parker-Garvin at the address and during the hours noted in Item 8.

8. ADMINISTRATIVE RECORD

The administrative record including application, draft permit, fact sheet, public notice (after release), documents cited herein, comments received and responses thereto, and other documents contained in the supporting file for the permit, is available by writing FDEP or for review and copying at 2600 Blairstone Road, Tallahassee, Florida 32399-2400 between the hours of 8 A.M. and 5 P.M., Monday through Friday. Copies will be provided at a minimal charge per page.

9. PROPOSED SCHEDULE FOR PERMIT ISSUANCE

Draft Permit to Applicant and EPA.....July 17, 1999
Applicant to Publish Public Notice (no later than).....August 16, 1999
Public Comment Period.....Beginning:.....August 19, 1999
Ending:.....October 18, 1999
Final Department Action.....November 18, 1999

10. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

a. Comment Period

The Florida Department of Environmental Protection proposes to issue an NPDES permit to this applicant subject to the aforementioned effluent limitations and special conditions. These determinations are tentative and open to comment from the public.

Copies of the Draft Permit (including Public Notice and Fact Sheet) will be available for review at the address noted in Item 8 and at the Department's Southeast District office located at 400 North Congress Avenue, West Palm Beach, Florida 33401. Interested persons are invited to submit written comments regarding permit issuance on the proposed permit limitations and conditions to the following address:

Industrial Wastewater Section
Mail Station 3545
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

All comments received within thirty (30) days following the date of public notice will be considered in the formulation of final determinations with regard to proposed permit issuance.

b. Public Meeting

Interested persons may submit to the Department at the above address a request for a public meeting, stating the nature of the issues the person proposes be raised at such meeting. The Department shall hold a public meeting following public notice whenever a significant degree of public interest in this permit is expressed through public comments and requests for a public meeting. If a public meeting is held, any person may submit oral or written statements and data concerning this draft permit. Public notice of such a public meeting will be given at least 30 days before the meeting.

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c. Preparation of a Proposed Permit

Following receipt of any public comments in accordance with a. and b. above, the Department will consider all significant comments in revising the draft permit and making a final decision to issue a final permit. If the draft permit is revised based on public comment it will be submitted to the U.S. Environmental Protection Agency as a proposed permit for EPA's concurrence in the Department's decision. Following receipt of any comments or objections from USEPA, the Department will either issue the proposed permit, issue a modified proposed permit, or deny the permit in accordance with the EPA objections.

d. Issuance of a Final Permit

The Department will prepare and send a public notice of the final permit to the applicant for publication in a local newspaper published in the vicinity of the project. That notice will advise the applicant and all affected persons of their right to petition for an administrative hearing pursuant to Chapter 120, Florida Statutes. Substantially affected persons will have 14 days from receipt of public notice to request an administrative hearing. If no administrative hearing is held, the Department will issue a final permit to the applicant.

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DEPARTMENT OF ENVIRONMENTAL PROTECTION, DISCHARGE MONITORING REPORT - 1...CT A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, 2600 Blair Stone Rd, Tallahassee FL 32399-2400

PERMITTEE NAME: Florida Power & Light
MAILING ADDRESS: 6501 S. Ocean Drive
Jensen Beach, Florida 34957

FACILITY: St. Lucie Power Plant - Units 1 & 2
LOCATION: 6501 S. Ocean Drive
Jensen Beach, Florida 34957
COUNTY: St. Lucie

PERMIT NUMBER: 0002208
MONITORING PERIOD From: _____
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: D-001
(formerly OSN 001)
PLANT SIZE/TREATMENT TYPE: _____
 -check if no discharge for reporting period

To: _____
REPORT: Monthly
GROUP: Industrial
DMR Issued: _____

Please read instructions before completing this form

Parameter	Quantity or Loading			Quality or Concentration			No. Ex.	Frequency of Analysis	Sample Type
	Avg.	Max.	Units	Min.	Avg.	Max.			
Flow									
STORET No. 50050 I Mon. Site No. INT-1		Report Inst. Maximum	MGD					Hourly	Pump Logs
Discharge Temperature (Normal Operations) STORET No. 00011 I Mon. Site No. EFF-2						113 Inst. Maximum		Hourly	Recorders
Temperature Rise (Normal Operations) STORET No. 61576 I Mon. Site No. EFF-2						30 Inst. Maximum		Hourly	Recorders
Discharge Temperature (Maintenance Operations) STORET No. 00011 Q Mon. Site No. EFF-2						117 Inst. Maximum		Hourly	Recorders
Temperature Rise (Maintenance Operations) STORET No. 61576 Q Mon. Site No. EFF-2						32 Inst. Maximum		Hourly	Recorders

NOTE: If any line not required, enter "NODI = 9".

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer Or Authorized Agent
	Telephone No. (incl. area code)
	Date (yy/mm/dd)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

LICENSE RENEWAL APPLICATION
ST. LUCIE UNITS 1 & 2

Part A (Continued)

DISCHARGE POINT NUMBER: D-001

PERMIT NUMBER: F10002208

FACILITY NAME: St. Lucie - Units 1 & 2

Parameter	Quantity or Loading			Quality or Concentration			No. Ex.	Frequency of Analysis	Sample Type
	Avg.	Max.	Units	Min.	Avg.	Max.			
Total Residual Oxidants									
STORET No. 34044 1 Mon. Site No. EFF-2					0.10 Inst. Maximum	mg/l		Continuous	Recorders
Time of Condenser Chlorine Addition (Unit 1)					120 Inst. Maximum	minutes/ day/unit		Daily	Log
STORET No. 50068 R Mon. Site No. EFF-2					120 Inst. Maximum	minutes/ day/unit		Daily	Log
Free Available Oxidants (Unit 1)					0.2 Average	mg/l		1 / 2 Months	Multiple Grabs
STORET No. 34045 R Mon. Site No. EFF-1					0.2 Average	mg/l		1 / 2 Months	Multiple Grabs

Note: If any line not required, enter "NODI = 9".

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive officer Or Authorized Agent	Telephone No. (incl. Area code)	Date (yy/mm/dd)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

LICENSE RENEWAL APPLICATION
ST. LUCIE UNITS 1 & 2

DEPARTMENT OF ENVIRONMENTAL PROTECTION, DISCHARGE MONITORING REPORT - 1...KT A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, 2600 Blair Stone Rd, Tallahassee FL 32399-2400

PERMITTEE NAME: Florida Power & Light
MAILING ADDRESS: 6501 S. Ocean Drive
Jensen Beach, Florida 34957

PERMIT NUMBER: 000Z408
MONITORING PERIOD From: _____
LIMIT: Final

To: _____
REPORT: Toxicity
GROUP: Industrial
DMR Issued:

FACILITY: St. Lucie Power Plant - Units 1 & 2
LOCATION: 6501 S. Ocean Drive
Jensen Beach, Florida 34957
COUNTY: St. Lucie

CLASS SIZE: Major

DISCHARGE POINT NUMBER: D-001

(formerly OSN 001)

PLANT SIZE/TREATMENT TYPE:

check if no discharge for reporting period

Please read instructions before completing this form

Parameter	Quantity or Loading			Quality or Concentration			No. Ex.	Frequency of Analysis	Sample Type
	Avg.	Max.	Units	Min.	Avg.	Max.			
Mysidopsis Bahía 96-hour acute static									
STORET No. TAN3E P Mon. Site No. EFF-2				100 Daily Minimum			Percent	Annual	Multiple Grab
Mysidopsis Bahía, 96-hour acute static									
STORET No. TAN3E Q Mon. Site No. EFF-2				100 Daily Minimum			Percent	As Required	Multiple Grab
Memidia Beryllina 96-hour acute static									
STORET No. TAN6B P Mon. Site No. EFF-2				100 Daily Minimum			Percent	Annual	Multiple Grab
Memidia Beryllina 96-hour acute static									
STORET No. TAN6B Q Mon. Site No. EFF-2				100 Daily Minimum			Percent	As Required	Multiple Grab

Note: If any line not required, enter "NODI = 9".

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive officer Or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

**LICENSE RENEWAL APPLICATION
ST. LUCIE UNITS 1 & 2**

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, 2600 Blair Stone Rd, Tallahassee FL 32399-2400

PERMITTEE NAME: Florida Power & Light
MAILING ADDRESS: 6501 S. Ocean Drive
 Jensen Beach, Florida 34957

FACILITY: St. Lucie Power Plant - Units 1 & 2
LOCATION: 6501 S. Ocean Drive
 Jensen Beach, Florida 34957

COUNTY: St. Lucie

PERMIT NUMBER: 0002208
MONITORING PERIOD From: _____
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: I-003
 (formerly OSN 003)
PLANT SIZE/TREATMENT TYPE:
 -check if no discharge for reporting period

To: _____
REPORT: Monthly
GROUP: Industrial
DMR Issued:

Please read instructions before completing this form

Parameter	Quantity or Loading			Quality or Concentration			No. Ex.	Frequency of Analysis	Sample Type
	Avg.	Max.	Units	Min.	Avg.	Max.			
Flow									
STORET No. 50050 1 Mon. Site No. EFF-3	Report Average	Report Maximum	MGD					1/Batch	Calculation
Oil and Grease									
STORET No. 00556 1 Mon. Site No. EFF-3					15.0 Average	20.0 Maximum	mg/l	Annually	Grab
Total Suspended Solids									
STORET No. 00530 1 Mon. Site No. EFF-3					30.0 Average	100.0 Maximum	mg/l	1/Batch	Grab

Note: If any line not required, enter "NODI = 9".

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive officer Or Authorized Agent	Telephone No. (incl. area code)
		Date (yy/mm/dd)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

**LICENSE RENEWAL APPLICATION
ST. LUCIE UNITS 1 & 2**

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PLANT A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, 2600 Blair Stone Rd, Tallahassee FL 32399-2400

PERMITTEE NAME: Florida Power & Light
MAILING ADDRESS: 6501 S. Ocean Drive
 Jensen Beach, Florida 34957

PERMIT NUMBER: 0002208
MONITORING PERIOD FROM: _____ **To:** _____
LIMIT: Final **REPORT:** Monthly
CLASS SIZE: Major **GROUP:** Industrial
DISCHARGE POINT NUMBER: I-005 **DMR Issued:** _____
 (formerly OSN 005)
PLANT SIZE/TREATMENT TYPE: _____
 -check if no discharge for reporting period

FACILITY: St. Lucie Power Plant - Units 1 & 2
LOCATION: 6501 S. Ocean Drive
 Jensen Beach, Florida 34957
COUNTY: St. Lucie

Please read instructions before completing this form

Parameter	Quantity or Loading			Quality or Concentration			No. Ex.	Frequency of Analysis	Sample Type
	Avg.	Max.	Units	Min.	Avg.	Max.			
Flow									
STORET No. 50050 1 Mon. Site No. EFF-5	Report Average	Report Maximum	MGD					1/Discharge	Calculation
Oil and Grease									
STORET No. 00556 1 Mon. Site No. EFF-5					15.0 Average	20.0 Maximum		1/Discharge	Grab
Total Suspended Solids									
STORET No. 00530 1 Mon. Site No. EFF-5					30.0 Average	100.0 Maximum		1/Discharge	Grab

Note: If any line not required, enter "NODI = 9".

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer Or Authorized Agent	Telephone No. (incl. area code)
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):		

¹ One per discharge event or one per week which ever is more frequent, unless there is no discharge for that week. Total volume of batch and period of discharge shall be reported.

LICENSE RENEWAL APPLICATION
ST. LUCIE UNITS 1 & 2

FACILITY NAME: St. Lucie – Units 1 & 2

PERMIT NUMBER: F10002208

DISCHARGE POINT NUMBER: I-005

Parameter	Quantity or Loading			Quality or Concentration			No. Ex.	Frequency of Analysis	Sample Type
	Avg.	Max.	Units	Min.	Avg.	Max.			
Boron, Chemical Additive									
STORET No. 01020 1 Mon. Site No. EFF-2						4.0 Maximum		I/Discharge ^{1,2}	Calculation ³
Hydrazine, Chemical Additive									
STORET No. 81313 1 Mon. Site No. EFF-2						0.30 Maximum		I/Discharge ^{1,2}	Calculation ³
Dimethylamine, Chemical Additive									
STORET No. 77003 1 Mon. Site No. EFF-2						Report Maximum		I/Discharge ^{1,2}	Calculation ³
Carbohydrazide, Chemical Additive									
STORET No. 61916 1 Mon. Site No. EFF-2						Report Maximum		I/Discharge ^{1,2}	Calculation ³

Note: If any line not required, enter "NODI = 9".

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Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer Or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):			

¹ One per discharge event or one per week which ever is more frequent, unless there is no discharge for that week. Total volume of batch and period of discharge shall be reported.

² Boron and hydrazine or carbohydrazide shall be monitored once per batch by a grab sample, during wet lay-up discharges that result from the start-up of a unit following a refueling outage.

³ A grab sample shall be taken at the discharge of the steam generator to the discharge canal and the following calculations shall be used to determine the concentration from the discharge canal to the Atlantic Ocean (point of discharge (POD)):

$$\frac{\text{Steam Generator Blowdown Flow} \times \text{Blowdown Boron Concentration} = \text{Boron @ POD}}{\text{Once Through Cooling Water Flow}}$$

$$\frac{\text{Steam Generator Blowdown Flow} \times \text{Blowdown Hydrazine Concentration} = \text{Hydrazine @ POD}}{\text{Once Through Cooling Water Flow}}$$

$$\frac{\text{Steam Generator Blowdown Flow} \times \text{Blowdown Dimethylamine Concentration} = \text{Dimethylamine @ POD}}{\text{Once Through Cooling Water Flow}}$$

$$\frac{\text{Steam Generator Blowdown Flow} \times \text{Blowdown Carbohydrazide Concentration} = \text{Carbohydrazide @ POD}}{\text{Once Through Cooling Water Flow}}$$

**LICENSE RENEWAL APPLICATION
ST. LUCIE UNITS 1 & 2**

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, 2600 Blair Stone Rd, Tallahassee FL 32399-2400

PERMITTEE NAME: Florida Power & Light
MAILING ADDRESS: 6501 S. Ocean Drive
Jensen Beach, Florida 34957

PERMIT NUMBER: 0002208
MONITORING PERIOD From: _____
To: _____
REPORT: Annual
GROUP: Industrial
DMR Issued:

FACILITY: St. Lucie Power Plant - Units 1 & 2
LOCATION: 6501 S. Ocean Drive
Jensen Beach, Florida 34957
COUNTY: St. Lucie

LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: I-06B
(formerly OSN 006B)
PLANT SIZE/TREATMENT TYPE:
 -check if no discharge for reporting period

Please read instructions before completing this form

Parameter	Quantity or Loading			Quality or Concentration			No. Ex.	Frequency of Analysis	Sample Type
	Avg.	Max.	Units	Min.	Avg.	Max.			
Flow									
STORET No. 50050 1 Mon. Site No. EFF-6	Report Average	Report Maximum	MGD					Annually	Estimate
Oil and Grease									
STORET No. 00556 1 Mon. Site No. EFF-6					Report Average	Report Maximum	mg/l	Annually	Grab
Total Suspended Solids									
STORET No. 00530 1 Mon. Site No. EFF-6					Report Average	Report Maximum	mg/l	Annually	Grab

Note: If any line not required, enter "NODI = 9".

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Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer Or Authorized Agent
	Telephone No. (incl. area code)
	Date (yy/mm/dd)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

**LICENSE RENEWAL APPLICATION
ST. LUCIE UNITS 1 & 2**

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, 2600 Blair Stone Rd, Tallahassee FL 32399-2400

PERMITTEE NAME: Florida Power & Light
MAILING ADDRESS: 6501 S. Ocean Drive
 Jensen Beach, Florida 34957

FACILITY: St. Lucie Power Plant - Units 1 & 2
LOCATION: 6501 S. Ocean Drive
 Jensen Beach, Florida 34957

COUNTY: St. Lucie

PERMIT NUMBER: 0002208
MONITORING PERIOD From: _____
LIMIT: Final
CLASS SIZE: Major
DISCHARGE POINT NUMBER: I-06C
 (formerly OSN 006C)
PLANT SIZE/TREATMENT TYPE: _____
 -check if no discharge for reporting period

To: _____
REPORT: Annual
GROUP: Industrial
DMR Issued: _____

Please read instructions before completing this form

Parameter	Quantity or Loading			Quality or Concentration			No. Ex.	Frequency of Analysis	Sample Type
	Avg.	Max.	Units	Min.	Avg.	Max.			
Flow									
STORET No. 50050 1 Mon. Site No. EFF-7	Report Average	Report Maximum	MGD					Annually	Estimate
Oil and Grease									
STORET No. 00556 1 Mon. Site No. EFF-7				Report Average	Report Maximum	mg/l		Annually	Grab

Note: If any line not required, enter "NODI = 9".

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Name/Title of Principal Executive Officer or Authorized Agent (Type or Print)	Signature of Principal Executive Officer Or Authorized Agent	Telephone No. (incl. area code)	Date (yy/mm/dd)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

**LICENSE RENEWAL APPLICATION
ST. LUCIE UNITS 1 & 2**

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

WHEN COMPLETED MAIL THIS REPORT TO: Department of Environmental Protection, 2600 Blair Stone Rd, Tallahassee FL 32399-2400

PERMITTEE NAME: Florida Power & Light
MAILING ADDRESS: 6501 S. Ocean Drive
 Jensen Beach, Florida 34957
PERMIT NUMBER: 0002208
MONITORING PERIOD From: _____ **To:** _____
LIMIT: Final **REPORT:** Annual
CLASS SIZE: Major **GROUP:** Industrial
DISCHARGE POINT NUMBER: I-008 **DMR Issued:**

FACILITY: St. Lucie Power Plant - Units 1 & 2
LOCATION: 6501 S. Ocean Drive
 Jensen Beach, Florida 34957
COUNTY: St. Lucie
PLANT SIZE/TREATMENT TYPE:
 -check if no discharge for reporting period

Please read instructions before completing this form

Parameter	Quantity or Loading			Quality or Concentration			No. Ex.	Frequency of Analysis	Sample Type
	Avg.	Max.	Units	Min.	Avg.	Max.			
Flow									
STORET No. 50050 1 Mon. Site No. EFF-8	Report Average	Report Maximum	MGD						
Oil and Grease									Calculation
STORET No. 00556 1 Mon. Site No. EFF-8					15.0 Average	20.0 Maximum		1/Week	Grab
Total Suspended Solids									
STORET No. 00530 1 Mon. Site No. EFF-8					30.0 Average	100.0 Maximum		1/Week	Composite

Note: If any line not required, enter "NODI = 9".

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	Telephone No. (incl. area code)
	Date (yy/mm/dd)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):