



NOV 03 2017

L-2017-193
10 CFR 50.4
EPP 3.2.3

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

Re: St. Lucie Units 1 and 2
Docket Nos. 50-335 and 50-389
Environmental Protection Plan Report
Minor Permit Revision for Blowdown Sample Panel Discharge
IWW Permit No. FL0002208

Pursuant to Section 3.2.3 of the St. Lucie Environmental Protection Plan, Florida Power & Light Company (FPL) is hereby forwarding the enclosed copy of the revision to the Industrial Wastewater (IWW) Facility Permit (Permit Number FL0002208) as issued by the State of Florida Department of Environmental Protection on October 19, 2017.

Please contact Seth Duston (772) 467-7144 should you have any questions on this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michael J. Snyder'.

Michael J. Snyder
Licensing Manager
St. Lucie Plant

MJS/spt

Enclosure

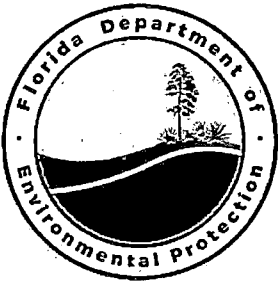
CODI
NRR

L-2017-193
Enclosure

Enclosure

Minor Permit Revision for Blowdown Sample Panel Discharge
IWW Permit No. FL0002208

(7 pages)



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Noah Valenstein
Secretary

October 19, 2017

SENT BY EMAIL TO:
(Daniel.DeBoer@fpl.com)

Mr. Daniel DeBoer
Site Director
Florida Power & Light Company
6501 S. Ocean Drive
Jensen Beach, Florida 34957

Re: Florida Power & Light Company
St. Lucie Power Plant Units 1 and 2
NPDES Permit No. FL0002208
Minor Permit Revision

Dear Mr. DeBoer:

The Florida Department of Environmental Protection (Department) received a minor revision application on September 15, 2017 to include a side wastewater stream for Internal Outfall I-005. After review, the Department hereby approves the request submitted with the minor revision application pursuant to Rules 62-620.200(24), 62-620.200(25), and 62-620.325(2), Florida Administrative Code. All other conditions of the permit shall remain the same except as specifically revised

If you object to this permit revision you may petition for an administrative hearing in accordance with the enclosed Notice of Rights. If a petition is filed, then this permit revision does not become effective. If you have any questions regarding this permit revision, please contact Mr. Marc Harris, P.E., or Kevin Ledbetter, P.E., in the Industrial Wastewater Program at (850) 245-8589.

Sincerely,

A handwritten signature in cursive script that reads "Elsa A. Potts".

Elsa A. Potts, P.E.

Elsa A. Potts, P.E.
Program Administrator
Industrial Wastewater Program
Division of Water Resource Management

EAP/mh/kl

Attachment

cc: Chrissi-Lee Ramsey, FPL (chrissi-lee.ramsey@fpl.com)
Ron.Hix, FPL (ron.hix@fpl.com)
Kent Edwards, FDEP SED (kent.edwards@dep.state.fl.us)
Greg Kennedy, FDEP SED (greg.a.kennedy@dep.state.fl.us)
Cindy Mulkey, FDEP Siting Coordination (cindy.mulkey@dep.state.fl.us)

NOTICE OF RIGHTS

A person whose substantial interests are affected by this permit revision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, within 14 days of receipt of this Permit. A petitioner, other than the applicant, shall mail a copy of the petition to the applicant at the address indicated in the attached letter at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

- (a) The name, address, and telephone number of each petitioner; the name, address, and telephone number of the petitioner's representative, if any; the Department case identification number and the county in which the subject matter or activity is located;
- (b) A statement of how and when each petitioner received notice of the Department action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department action;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A statement of facts that the petitioner contends warrant reversal or modification of the Department action;
- (f) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this intent. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this intent in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

STATEMENT OF BASIS FOR PERMIT REVISION

Permit Number: FL0002208
DEP File No.: FL0002208-019-IWB
Permit Writer: Kevin Ledbetter, P.E.

Application Date: September 15, 2017
Additional Information: October 3, 2017

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
6501 S. Ocean Drive (South State Road A1A)
St. Lucie County
Jensen Beach, Florida 34957

B. Description of Proposed Activity:

The Department received a minor revision application for the above referenced NPDES permit for Florida Power & Light (FPL) St. Lucie Power Plant on September 15, 2017. FPL requested that monitoring requirements for an existing minor continuous discharge of less than 1 gpm (<1440 gpd) of steam generator blowdown water to the discharge canal be included in the permit. The wastewater steam is a side stream that is used to monitor pollutants and safety related parameters. The stream is fed through the blowdown sample panel before discharging through I-005. Monitoring requirements for the side stream were included in the table for Internal Outfall I-005.

C. Changes to Existing NPDES Permit

- (1) Page 9, I.B.3. Monitoring requirements for the new location were included in the table, along with a provision for reduction of frequency to quarterly after a period of six months.
- (2) Page 9, I.B.4. The new sample monitoring location was included in the list of current locations.

This constitutes Revision A (Rev. A) to the permit. All changes to the permit are noted in Rev. A by italics and underline or strike-through.

**STATE OF FLORIDA
INDUSTRIAL WASTEWATER FACILITY PERMIT**

PERMITTEE:

Florida Power & Light (FPL)

PERMIT NUMBER: FL0002208 (Major)(*Rev.A*)

FILE NUMBER: FL0002208-017-IW1S

ISSUANCE DATE: November 4, 2016

REVISION DATE: October 19, 2017

EXPIRATION DATE: November 3, 2021

RESPONSIBLE OFFICIAL:

Richard L. Anderson
Vice President
6501 S. Ocean Drive
Jensen Beach, Florida 34957

FACILITY:

St. Lucie Power Plant Units 1 and 2
Hutchinson Island
St. Lucie County, Florida
Latitude: See Note Below Longitude: See Note Below

Note: Latitude and longitude are not shown at the permittee's request, for purposes of Homeland Security pursuant to federal regulations found at 18 CFR 388.113(c)(i) and (ii) and by Presidential Directive dated December 17, 2003.

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and applicable rules of the Florida Administrative Code (F.A.C.) and constitutes authorization to discharge to waters of the state under the National Pollutant Discharge Elimination System. This permit does not constitute authorization to discharge wastewater other than as expressly stated in this permit. The above-named permittee is hereby authorized to operate the facilities in accordance with the documents attached hereto and specifically described as follows:

FACILITY DESCRIPTION:

The plant is located in St. Lucie County on Hutchinson Island, Jensen Beach, Florida. The existing facility consists of two nuclear powered steam electric generating units (Unit 1 and Units 2) with a total generating capacity of 1908 megawatts. The plant has a once-through cooling water (OTCW) system and auxiliary equipment cooling water (AECW) system that uses water from the Atlantic Ocean, a Class III marine water body, to remove heat from the main condensers and discharged to the plant's discharge canal.

Cooling water gravity flows from the Atlantic Ocean through three offshore intake structures into the intake canal. The water is then pumped through the main condensers for each unit. Heated cooling water is released to the discharge canal and back to the Atlantic Ocean through existing offshore Y and multi-port diffusers.

Units 1 and 2 are also regulated under the Florida Electrical Power Plant Siting Act (License No. PA74-02).

The radioactive component of the discharge is regulated by the U.S. Nuclear Regulatory Commission under the Atomic Energy Act, and not by the Department or the U.S. Environmental Protection Agency under the Clean Water Act.

WASTEWATER TREATMENT:

The wastewater generated at the facility consists of once-through cooling water, steam generator blowdown, liquid radiation waste, intake screen wash wastewater, and stormwater associated with industrial activity. Units 1 and 2 cooling water and auxiliary equipment cooling water (AECW) are treated by chlorination with biofouling control, and by using sodium molybdate, sodium nitrite and tolytriazole. Equipment area storm water is routed through an oil/water separator prior to discharge to the stormwater basins and then to the Intake Canal through the Southeast Basin. Low volume waste (LVW) (consisting of water treatment system wastewater, steam generator/boiler blowdown, and equipment area floor drainage), non-radioactive wastes/liquid radiation waste, and stormwater associated with industrial activity are treated by chemical/physical processes including neutralization, settling, ion exchange and micro filtration. Non-industrial stormwater and intake screen wash water are discharged without treatment.

PERMITTEE: Florida Power & Light Company
 FACILITY: St. Lucie Power Plant

PERMIT NUMBER: FL0002208-017 (Major)(Rev. A)
 EXPIRATION DATE: **November 3, 2021**

Additions to the permit are identified by italics and underline. Deletions are identified by strikethrough.

- 15.(a)(2), the Department may revise this permit to require acute definitive whole effluent toxicity testing.
- (5) The additional follow-up testing and the plan do not preclude the Department taking enforcement action for acute or chronic whole effluent toxicity failures.

[62-4.241, 62-620.620(3)]

16. The withdrawal of water for the testing and functioning of the emergency cooling systems for the St. Lucie Plant from that portion of the Indian River known as Big Mud Creek shall be in accordance with the following:
- Testing of the alternate emergency cooling systems not to exceed 4,000,000 gallons per calendar year.
 - Flow of water in the alternate emergency cooling system, in the event that the main source of emergency cooling water from the Atlantic Ocean is not available, shall not exceed 60,000 gallons per minute, and may continue until the main source of emergency cooling water has been restored.
 - The permittee shall notify the Southeast District Office of the Department prior to each test of the emergency cooling canal system, and shall also notify the Department of any use of the emergency cooling canal system lasting more than twelve hours.
 - Starting with the issuance of this permit, all pertinent flow and length of time information associated with withdrawal of water from Big Mud Creek shall be kept on site in accordance with permit Condition V.2 and made available to Department inspectors upon request.
17. The permittee shall submit annually to the Department the "Annual Radiological Environmental Operating Report", along with the summarized monitoring results for gross alpha particle activity and total radium 226+radium 228 from the report.

B. Internal Outfalls

1. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge **process wastewater and monitoring well sample purge water** from **Internal Outfall I-003** to the onsite discharge canal. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.C.3.:

Parameter	Units	Max/ Min	Effluent Limitations		Monitoring Requirements			Notes
			Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	
Flow	MGD	Max Max	Report Report	Daily Maximum Monthly Average	Per batch of process	Calculated	OUI-1	
Oil and Grease	mg/L	Max Max	15.0 20.0	Monthly Average Daily Maximum	Annually	Grab	OUI-1	
Solids, Total Suspended	mg/L	Max Max	30.0 100.0	Monthly Average Daily Maximum	Per batch of process	Grab	OUI-1	

2. Effluent samples shall be taken at the monitoring site locations listed in Permit Condition I.B.1. and as described below:

Monitoring Site Number	Description of Monitoring Site
OUI-1	Discharge from the radiation waste system prior to mixing with any other waste stream.

3. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge **steam generator blowdown, including a minor side stream through the blowdown sample panel**, from **Internal Outfall I-005** to the onsite discharge canal. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition

PERMITTEE: Florida Power & Light Company

PERMIT NUMBER: FL0002208-017 (Major)(Rev. A)

FACILITY: St. Lucie Power Plant

EXPIRATION DATE: November 3, 2021

Additions to the permit are identified by italics and underline. Deletions are identified by strikethrough.

I.C.3.:

Parameter	Units	Effluent Limitations			Monitoring Requirements			Notes
		Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	
Flow	MGD	Max Max	Report Report	Daily Maximum Monthly Average	Weekly, when discharging	Calculated	OUI-2	See I.B.5
		<u>Max</u>	<u>Report</u>	<u>Daily Maximum</u>	<u>Monthly²</u>	<u>Calculated¹</u>	<u>CAL-1</u>	See I.B.6
Oil and Grease	mg/L	Max Max	15.0 20.0	Monthly Average Daily Maximum	Weekly, when discharging	Grab	OUI-2	See I.B.5
		<u>Max</u> <u>Max</u>	<u>15.0</u> <u>20.0</u>	<u>Daily Maximum</u> <u>Monthly Average</u>	<u>Monthly²</u>	<u>Grab</u>	<u>OUI-7</u>	See I.B.6
Solids, Total Suspended	mg/L	Max Max	30.0 100.0	Monthly Average Daily Maximum	Weekly, when discharging	Grab	OUI-2	See I.B.5
		<u>Max</u> <u>Max</u>	<u>30.0</u> <u>100.0</u>	<u>Daily Maximum</u> <u>Monthly Average</u>	<u>Monthly²</u>	<u>Grab</u>	<u>OUI-7</u>	See I.B.6
Hydrazine	mg/L	Max	0.30	Daily Maximum	Weekly, when discharging	Grab	EFF-2	See I.B.5, I.B.7, and I.B.8
Carbohydrazide	mg/L	Max	Report	Daily Maximum	Weekly, when discharging	Grab	EFF-2	See I.B.5, I.B.7, and I.B.8

4. Effluent samples shall be taken at the monitoring site locations listed in Permit Condition I.B.3. and as described below:

Monitoring Site Number	Description of Monitoring Site
OUI-2	Discharge from I-005 prior to entering the discharge canal.
<u>OUI-7</u>	<u>At the laboratory sample panel prior to entering the blowdown tank.</u>
EFF-2	Within the discharge canal upstream of the discharge piping to the Atlantic Ocean.
<u>CAL-1</u>	<u>Calculation of the flow rate.</u>

5. Monitoring Location OUI-2 for Internal Outfall I-005 shall be monitored once per discharge event or once per week when discharging steam generator blowdown, whichever is more frequent, unless there is no discharge for that week. Total volume of batch and period of discharge shall be reported.
6. Hydrazine and 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.
7. 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)].

$$\text{Hydrazine at POD (mg/L)} = \frac{\text{Steam Generator Flow (MGD)} \times \text{Blowdown Hydrazine Concentration (mg/L)}}{\text{Once-Through Cooling Water Flow (MGD)}}$$

$$\text{Carbohydrazide at POD (mg/L)} = \text{Steam Generator Flow (MGD)} \times \text{Blowdown Carbohydrazide Concentration (mg/L)}$$

¹ Flow from the lab sample panel shall consist of a sum of the flow meter readings from the 1-inch pipes and the calculated flow from the 2-inch pipe. The sum of all three flows shall be reported on the Discharge Monitoring Report.

² After six months of consecutive monitoring and reporting the lab sample panel side stream, if the results show that the samples for TSS and oil and grease at locations OUI-2 and OUI-7 are similar, and the Department concurs, the permittee may reduce monitoring at the lab sample panel to quarterly.

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

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

PERMIT NUMBER: FL0002208-017-IW1S

FACILITY: St. Lucie Plant Units 1 and 2
 LOCATION: Hutchinson Island, FL

LIMIT: Final
 CLASS SIZE: MA
 MONITORING GROUP NUMBER: I-005
 MONITORING GROUP DESCRIPTION: Steam generator blowdown to the discharge canal to the Atlantic Ocean.
 RE-SUBMITTED DMR:
 NO DISCHARGE FROM SITE:

REPORT FREQUENCY: Monthly
 PROGRAM: Industrial

COUNTY: St. Lucie
 OFFICE: Southeast District

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration		Units	No. Ex.	Frequency of Analysis	Sample Type
Flow	Sample Measurement									
PARM Code 50050 P Mon. Site No. OUI-2	Permit Requirement	Report (Mo.Avg.)	Report (Day.Max.)	MGD					Weekly, when discharging	Calculated
Flow	Sample Measurement									
PARM Code 50050 Q Mon. Site No. CAL-1	Permit Requirement		Report (Day.Max.)	MGD					Monthly	Calculated
Oil and Grease	Sample Measurement									
PARM Code 00556 P Mon. Site No. OUI-2	Permit Requirement				15.0 (Mo.Avg.)	20.0 (Day.Max.)	mg/L		Weekly, when discharging	Grab
Oil and Grease	Sample Measurement									
PARM Code 00556 Q Mon. Site No. OUI-7	Permit Requirement				15.0 (Mo.Avg.)	20.0 (Day.Max.)	mg/L		Monthly	Grab
Solids, Total Suspended	Sample Measurement									
PARM Code 00530 P Mon. Site No. OUI-2	Permit Requirement				30.0 (Mo.Avg.)	100.0 (Day.Max.)	mg/L		Weekly, when discharging	Grab
Solids, Total Suspended	Sample Measurement									
PARM Code 00530 Q Mon. Site No. OUI-7	Permit Requirement				30.0 (Mo.Avg.)	100.0 (Day.Max.)	mg/L		Monthly	Grab
Hydrazine	Sample Measurement									
PARM Code 81313 1 Mon. Site No. EFF-2	Permit Requirement					0.30 (Day.Max.)	mg/L		Weekly, when discharging	Grab
Carbohydrazide	Sample Measurement									
PARM Code 61916 1 Mon. Site No. EFF-2	Permit Requirement					Report (Day.Max.)	mg/L		Weekly, when discharging	Grab

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

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