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

Sent by E-mail to:
(Brian.Stamp@fpl.com)

In the Matter of an
Application for Permit by:

Florida Power & Light Company
Mr. Brian Stamp
Plant Turkey Nuclear General Manager
9760 SW 344 Street
Florida City, Florida 33035

Miami-Dade County
Turkey Point Power Plant
NPDES Permit No. FL0001562
PA File No. FL0001562-012-IW1N

NOTICE OF DRAFT PERMIT

The Department of Environmental Protection gives notice of a draft National Pollutant Discharge Elimination System (NPDES) permit renewal (DEP File No. FL0001562-012-IW1N) for the wastewater treatment and effluent disposal facilities for three steam-electric generating units (Units 3, 4, and 5) at the Turkey Point Power Plant. The power plant is owned and operated by Florida Power & Light Company (FPL) and located at 9760 SW 344 Street, Florida City in Miami-Dade County, Florida. This renewal permit requires additional monitoring for the wastewater treatment and effluent disposal facilities and new monitoring for groundwater and surface waters adjacent to those facilities.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and applicable rules of the Florida Administrative Code. The project is not exempt from permitting procedures. The Department has determined that a wastewater permit is required for the proposed work.

Based upon the application and supplemental information, the Department has determined that the applicant has provided reasonable assurance that the above described wastewater project complies with the applicable provisions of Chapter 403 of the Florida Statutes and Title 62 of the Florida Administrative Code.

The Department intends to issue the above referenced permit based on its belief that reasonable assurances have been provided to indicate that the proposed project will not adversely impact water quality and the proposed project will comply with the appropriate provisions of the Florida Administrative Code Rule 62-620 as long as all of the conditions in the attached permit are adhered to.

Under Section 403.815, Florida Statutes, and Rule 62-620.550, Florida Administrative Code, you (the applicant) are required to publish at your own expense the enclosed Notice of Draft Permit and Request for Public Comment. The notice must be published one time only within 30 days of receipt of this draft permit in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, Florida Statutes, in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used should be one with significant

circulation in the area that may be affected by the permit. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant must provide proof of publication to the Department of Environmental Protection, Bob Martinez Center, Industrial Wastewater Program, 2600 Blair Stone Road, Mail Station 3545, Tallahassee, Florida 32399-2400, within two weeks of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department intends to issue the permit with the attached conditions unless as a result of public comment appropriate changes are made.

Any interested person may submit written comments on the Department's proposed permitting decision to Mr. Marc Harris, P.E., Department of Environmental Protection, Bob Martinez Center, Industrial Wastewater Program, 2600 Blair Stone Road, Mail Station 3545, Tallahassee, Florida 32399-2400 in accordance with Rule 62-620.555, Florida Administrative Code. The comments must contain the information set forth below and must be received in the Department's Industrial Wastewater Program. Comments from the permit applicant and the persons listed below must be received within 30 days of receipt of this draft renewal permit. Comments submitted by other persons must be received within 30 days of publication of the public notice. Failure to submit within this time period shall constitute a waiver of any right such person may have to submit comments under Rule 62-620.555, Florida Administrative Code.

The comments must contain the following information:

(a) The commenter's name, address, and telephone number; the applicant's name and address; the Department permit file number; and the county in which the project is proposed;
(b) A statement of how and when notice of the Department's action or proposed action was received;
(c) A statement of the facts the Department should consider in making the final decision;
(d) A statement of which rules or statutes require reversal or modification of the Department's action or proposed action; and
(e) If desired, a request that a public meeting be scheduled including a statement of the nature of the issues proposed to be raised at the meeting. Any person may submit oral or written statements and data at the public meeting on the Department's proposed action.

The Department will be scheduling a public meeting on this draft renewal permit. A separate public notice announcing the date, time and location of the meeting will be published at least 30 days before the scheduled date. As a result of significant public comment, the Department's final action may be different from the position taken by it in this draft renewal permit.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Benjamin M. Melnick
Deputy Director
Division of Water Resource Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this permit and all copies were sent on the filing date below to the following listed persons:

Matthew Raffenberg, Senior Director, Environmental Services, FPL (matthew.raffenberg@fpl.com)
EPA Region 4 (r4npdespermits@epa.gov)
Molly Davis, Chief, NPDES Permitting Section, EPA Region 4 (davis.molly@epa.gov)
Karrie-Jo Shell, Power Plant NPDES Permits, EPA Region 4 (shell.karrie-Jo@epa.gov)
Lee Hefty, Director, Division of Regulatory and Economic Resources, Miami-Dade DERM (heftyl@miamidade.gov)
Terrie Bates, Director, Water Resources Division, SFWMD (tbates@sfwmd.gov)
Esteban L. Bovo, Jr., Chairman, Board of Miami-Dade County Commissioners (district13@miamidade.gov)
FWC, Conservation Planning Services (fwcconservationplanningservices@myfwc.com)
Jim Valade, U.S. Fish and Wildlife Service (jim_valade@fws.gov)
Adam Brame, National Marine Fisheries Service (adam.brame@noaa.gov)
Margaret Goodro, Superintendent, Biscayne National Park, National Park Service (margaret_goodro@nps.gov)
Florida Department of Economic Opportunity, State Land Planning Agency (dcppermits@deo.myflorida.com)
Florida Department of State, Bureau of Historic Preservation (compliancepermits@dos.state.fl.us)
U.S. Army Corps of Engineers (james.j.mcadams@usace.army.mil)
Jason Andreotta, Assistant Director, Southeast District, FDEP (jason.andreotta@floridadep.gov)
Diane Pupa, Program Administrator, Southeast District, FDEP (diane.pupa@floridadep.gov)
Cindy Mulkey, Program Administrator, Siting Coordination Office, FDEP (cindy.mulkey@floridadep.gov)

FILING AND ACKNOWLEDGMENT

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

Shirley Shields
Clerk

December 27, 2018
Date

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

The Department of Environmental Protection gives notice of a draft National Pollutant Discharge Elimination System (NPDES) permit renewal (DEP File No. FL0001562-012-IW1N) for the wastewater treatment and effluent disposal facilities for three steam-electric generating units (Units 3, 4, and 5) at the Turkey Point Power Plant. The power plant is owned and operated by Florida Power & Light Company (FPL) and located at 9760 SW 344 Street, Florida City in Miami-Dade County, Florida. in Miami-Dade County, Florida. This renewal permit requires additional monitoring for the wastewater treatment and effluent disposal facilities and new monitoring for groundwater and surface waters adjacent to those facilities.

Any interested person may submit written comments on the Department's draft permit revision to the Department of Environmental Protection, Bob Martinez Center, Industrial Wastewater Program, 2600 Blair Stone Road, Mail Station 3545, Tallahassee, Florida 32399-2400, Attention: Mr. Marc Harris, P.E., in accordance with Rule 62-620.555, Florida Administrative Code (F.A.C.). The comments must contain the information set forth below and must be received in the Department's Industrial Wastewater Program within 30 days of publication of this notice. Failure to submit comments within this time period shall constitute a waiver of any right such person may have to submit comments under Rule 62-620.555, F.A.C.

The comments must contain the following information:

(a) The commenter's name, address, and telephone number; the applicant's name and address; the Department permit revision file number; and the county in which the project is proposed;
(b) A statement of how and when notice of the Department's action or proposed action was received;
(c) A statement of the facts the Department should consider in making the final decision;
(d) A statement of which rules or statutes require reversal or modification of the Department's action or proposed action; and
(e) If desired, a request that a public meeting be scheduled including a statement of the nature of the issues proposed to be raised at the meeting. Any person may submit oral or written statements and data at the public meeting on the Department's proposed action.

The Department will be scheduling a public meeting on this draft renewal permit. A separate public notice announcing the date, time and location of the meeting will be published at least 30 days before the scheduled date. As a result of significant public comment, the Department's final action may be different from the position taken by it in this draft renewal permit.

The permit renewal application file and supporting data are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Florida Department of Environmental Protection, Bob Martinez Center, Industrial Wastewater Program, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, Phone Number: (850) 245-8589.

STATE OF FLORIDA
INDUSTRIAL WASTEWATER FACILITY PERMIT

PERMITTEE:
Florida Power & Light Company (FPL)
9760 S.W. 344 Street
Florida City, Florida 33035

PERMIT NUMBER: FL0001562 (Major)
FILE NUMBER: FL0001562-012-IW1N
ISSUANCE DATE:
EXPIRATION DATE:

RESPONSIBLE OFFICIAL:

Brian Stamp
Point Turkey Nuclear (PTN) General Manager

FACILITY:

FPL Turkey Point Power Plant
9760 SW 344 Street
Florida City, Florida 33035
Miami-Dade County

Latitude: 25° 26' 09" N Longitude: 80° 19' 51" W

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 authorizes discharges explicitly expressed in this permit. 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:

FACILITY DESCRIPTION:

The Turkey Point facility is located on approximately 11,000 acres in unincorporated southeast Miami-Dade County about 25 miles south of Miami and about nine miles east of Florida City and Homestead. Biscayne National Park lies adjacent to northeastern portions of the facility. The Biscayne Bay Aquatic Preserve is southeast of the facility. Everglades National Park is to the south and west.

Several canals are in close proximity to the facility. West of the facility are the South Florida Water Management District (SFWMD) L-31E Canal, the historic C-106 Canal (Model Lands North Canal), and the historic C-107 Canal (Model Lands South Canal). Southeast of the facility is the Card Sound Canal and southwest and south is the SFWMD S-20 Discharge Canal. The remnant canals at Turtle Point and the Barge Basin are located east northeast and northeast of the facility, respectively.

The facility consists of three electrical generating units: two nuclear units (Units 3 and 4) and one natural gas-fired combined cycle unit (Unit 5). Units 3, 4, and 5 began commercial operation in 1972, 1973, and 2007, respectively. Units 3 and 4 each have a nominal capacity of 815 Megawatts (MW) and Unit 5 has a nominal capacity of 1209 MW. Units 3, 4 and 5 are also regulated under the Florida Electrical Power Plant Siting Act (License No. PA03-045).

FPL owns and operates a cooling canal system (CCS) at the facility. The CCS provides a heat removal function for the cooling water from Units 3, 4 and 5. The heated water generated by operation of Units 3, 4, and 5 is discharged to the recirculating CCS and returned to Units 3 and 4. The temperature of the water returned to Units 3 and 4 is regulated by the U.S. Nuclear Regulatory Commission under the Atomic Energy Act. Groundwater withdrawals from the Floridan aquifer is the source of cooling water for Unit 5, and is authorized under License No. PA03-045.

WASTEWATER TREATMENT:

Stormwater and wastewater associated with power generation and ancillary activities are released to the CCS, which discharges to groundwater beneath the system. Discharges from the facility to surface waters of the State are not authorized under this permit.

Stormwater runoff associated with loading and unloading operations, outdoor storage, outdoor process activities, and ancillary maintenance activities is directed toward and released into the CCS. The quantities of stormwater generated from these activities are dependent on many variables, including the length and intensity of the storm event. Wastewater generated by Units 3 and 4 includes intermittent chemical volume control system including wet lay-up, feedwater condensate including wet lay-up, on-line chemical analyzer, steam generator blowdown, condensate polisher backwash, reverse osmosis reject, circulating water pumps seal water, alternate flow from the circulating water pump seal water tank, non-equipment area stormwater, maintenance/wash through equipment area/closed cooling water system maintenance, plant intake screen wash, and non-contact once-through condenser cooling water (OTCW).

Wastewater generated by Unit 5 includes cooling water, emergency generator backup cooling water, non-equipment area stormwater, equipment area stormwater and plant drains following oil/water separation, and wastewater sump discharge which includes heat recovery steam generator blowdown, wastewater treatment system blowdown, and cooling water treatment reject.

REUSE OR DISPOSAL:

Groundwater Discharge: The CCS is not lined, and is authorized to discharge to Class G-III groundwater. Groundwater monitoring requirements for this facility are in accordance with Section I of this permit. The discharge shall meet the Class G-III groundwater standards of Rule 62-520.430, F.A.C. The discharge shall not impair the reasonable and beneficial use of adjacent waters. Rule 62-520.400(1)(f), F.A.C. The 1972 Environmental Impact Statement acknowledges that some seepage of water from the CCS may reach surface waters. To the extent that such seepage occurs, it shall not cause or contribute to a violation of the surface water quality standards in Chapter 62-302, F.A.C.

Surface Water Discharges: This permit does not authorize surface water discharges from the CCS through a point source to surface waters of the State.

Internal Outfall I-001: An existing permitted outfall that discharges plant process wastewater to the facility's on-site CCS.

Groundwater Monitoring Group G-001: A new permitted outfall that monitors groundwater.

Surface Water Monitoring Group D-01A: A new permitted series of surface water monitoring sites in Biscayne Bay, L-31 canal, S-20 canal and Card Sound canal that monitors surface waters.

Surface Water Monitoring Group D-02A: A new permitted series of porewater (free water present in sediments) monitoring sites in coastal marine wetlands north, east, and south of the facility's onsite CCS.

Stormwater Discharges: This permit authorizes stormwater to be released to the facility's on-site CCS. Stormwater will intermittently include wash-down water consisting of potable water with no additives.

IN ACCORDANCE WITH: The limitations, monitoring requirements and other conditions as set forth in Part I through Part IX on pages 2 through 33 of this permit.

I. GROUNDWATER MONITORING REQUIREMENTS

1. The permittee's discharges to ground water shall not cause a violation of the minimum criteria for ground water specified in Rules 62-520.400 and 62-520.430, F.A.C. [1]

2. The permittee's discharges to groundwater shall not impair the designated use of contiguous surface waters.[2] *[62-520.310(2)]*

[1] Consent Order OGC File Number 16-0241, paragraphs 19 and 20 stipulate remedial actions and timelines for achieving compliance with groundwater minimum criteria of Rule 62-520.400, F.A.C.

3. During the period of operation authorized by this permit, the permittee shall sample groundwater from the Biscayne aquifer from the following monitoring wells, designated as **Groundwater Monitoring Group G-001,** as described below:

Monitoring Well ID	Description of Monitoring Location	Latitude			Longitude		
		o	'	"	o	'	"
TPGW-1S	West of Canal L-31E, west of northwest corner of the CCS (shallow)	25	26	4.7	80	21	15.8
TPGW-1M	West of Canal L-31E, west of northwest corner of the CCS (intermediate)	25	26	4.7	80	21	15.8
TPGW-1D	West of Canal L-31E, west of northwest corner of the CCS (deep)	25	26	4.7	80	21	15.8
TPGW-2S	West of the south-central portion of the CCS (shallow)	25	22	54.2	80	22	11.4
TPGW2M	West of the south-central portion of the CCS (intermediate)	25	22	54.2	80	22	11.4
TPGW-2D	West of the south-central portion of the CCS (deep)	25	22	54.2	80	22	11.4
TPGW-3S	South of the CCS (shallow)	25	20	42.1	80	20	51.9
TPGW-3M	South of the CCS (intermediate)	25	20	42.1	80	20	51.9
TPGW-3D	South of the CCS (deep)	25	20	42.1	80	20	51.9
TPGW-4S	Southwest Model Lands, at Tallahassee Road (shallow)	25	22	12.0	80	24	44.1
TPGW-4M	Southwest Model Lands, at Tallahassee Road (intermediate)	25	22	12.0	80	24	44.1
TPGW-4D	Southwest Model Lands, at Tallahassee Road (deep)	25	22	12.0	80	24	44.1
TPGW-5S	Northwest Model Lands – east of Tallahassee Road (shallow)	25	25	23.9	80	24	13.3
TPGW-5M	Northwest Model Lands – east of Tallahassee Road (intermediate)	25	25	23.9	80	24	13.3
TPGW-5D	Northwest Model Lands – east of Tallahassee Road (deep)	25	25	23.9	80	24	13.3
TPGW-6S	Northwest of the CCS, east of Homestead – Miami Speedway (shallow)	25	27	20.3	80	23	13.0
TPGW-6M	Northwest of the CCS, east of Homestead – Miami Speedway (intermediate)	25	27	20.3	80	23	13.0
TPGW-6D	Northwest of the CCS, east of Homestead – Miami Speedway (deep)	25	27	20.3	80	23	13.0
TPGW-7S	Northwest Model Lands (shallow)	25	26	02.5	80	25	40.7
TPGW-7M	Northwest Model Lands (intermediate)	25	26	02.5	80	25	40.7
TPGW-7D	Northwest Model Lands (deep)	25	26	02.5	80	25	40.7
TPGW-8S	West central Model Lands (shallow)	25	24	36.4	80	27	08.7
TPGW-8M	West central Model Lands (intermediate)	25	24	36.4	80	27	08.7
TPGW-8D	West central Model Lands (deep)	25	24	36.4	80	27	08.7
TPGW-9S	West of Card Sound Canal Road, southwest of CCS (shallow)	25	22	28.6	80	28	41.9
TPGW-9M	West of Card Sound Canal Road, southwest of CCS (intermediate)	25	22	28.6	80	28	41.9
TPGW-9D	West of Card Sound Canal Road, southwest of CCS (deep)	25	22	28.6	80	28	41.9
TPGW-10S	Biscayne Bay, channel entrance to Barge Basin (shallow)	25	26	27.4	80	19	29.0
TPGW-10M	Biscayne Bay, channel entrance to Barge Basin (intermediate)	25	26	27.4	80	19	29.0
TPGW-10D	Biscayne Bay, channel entrance to Barge Basin (deep)	25	26	27.4	80	19	29.0
TPGW-11S	Biscayne Bay, east of the CCS (shallow)	25	23	49.4	80	18	15.0
TPGW-11M	Biscayne Bay, east of the CCS (intermediate)	25	23	49.4	80	18	15.0
TPGW-11D	Biscayne Bay, east of the CCS (deep)	25	23	49.4	80	18	15.0
TPGW-12S	North of the CCS (shallow)	25	26	55.4	80	20	22.9
TPGW-12M	North of the CCS (intermediate)	25	26	55.4	80	20	22.9
TPGW-12D	North of the CCS (deep)	25	26	55.4	80	20	22.9
TPGW-13S	In the central portion of the CCS (shallow)	25	23	39.0	80	21	07.1
TPGW-13M	In the central portion of the CCS (intermediate)	25	23	39.0	80	21	07.1
TPGW-13D	In the central portion of the CCS (deep)	25	23	39.0	80	21	07.1
TPGW-14S	Biscayne Bay, southeast of the CCS (shallow)	25	21	15.5	80	19	34.5
TPGW-14M	Biscayne Bay, southeast of the CCS (intermediate)	25	21	15.5	80	19	34.5
TPGW-14D	Biscayne Bay, southeast of the CCS (deep)	25	21	15.5	80	19	34.5
TPGW-15S	Northwest corner of CCS (shallow)	25	25	56.9	80	21	2.5
TPGW-15M	Northwest corner of CCS (intermediate)	25	25	56.9	80	21	2.5
TPGW-15D	Northwest corner of CCS (deep)	25	25	56.9	80	21	2.5
TPGW-16S	East of the south-central portion of the CCS (shallow)	25	22	37.7	80	19	53.8
TPGW-16M	East of the south-central portion of the CCS (intermediate)	25	22	37.7	80	19	53.8

[2] Consent Order OGC File Number 16-0241, paragraphs 19 and 21 stipulate remedial actions and timelines for achieving compliance with this condition of subsection 62-520.310(2), F.A.C.

Monitoring Well ID	Description of Monitoring Location	Latitude			Longitude		
		º	'	"	º	'	"
TPGW-16D	East of the south-central portion of the CCS (deep)	25	22	37.7	80	19	53.8
TPGW-17S	East of the L-31E canal, adjacent to S-20 structure (shallow)	25	22	1.4	80	22	32.2
TPGW-17M	East of the L-31E canal, adjacent to S-20 structure (intermediate)	25	22	1.4	80	22	32.2
TPGW-17D	East of the L-31E canal, adjacent to S-20 structure (deep)	25	22	1.4	80	22	32.2
TPGW-18S	Model Lands, west of L-3 (shallow)	25	25	12.5	80	22	17.8
TPGW-18M	Model Lands, west of L-3 (intermediate)	25	25	12.5	80	22	17.8
TPGW-18D	Model Lands, west of L-3 (deep)	25	25	12.5	80	22	17.8
TPGW-19S	Model Lands, north of Florida City Canal (shallow)	25	26	54.2	80	21	31.33
TPGW-19M	Model Lands, north of Florida City Canal (intermediate)	25	26	54.2	80	21	31.33
TPGW-19D	Model Lands, north of Florida City Canal (deep)	25	26	54.2	80	21	31.33
TPGW-20D	Adjacent to City of Homestead baseball complex	25	27	9.99	80	26	0.5
TPGW-21S	Converted USGS well G-3164 (shallow)	25	25	20.2	80	26	10
TPGW-21M	Converted USGS well G-3164 (intermediate)	25	25	20.2	80	26	10
TPGW-21D	Converted USGS well G-3164 (deep)	25	25	20.2	80	19	10
L-3	East of the L-31E canal, north-central portion of the CCS (Not Automated). This well is an open-hole well, monitored at approximately 18 feet and 58 feet below land surface.	25	25	09.7	80	21	28.7
L-5	East of the L-31E canal, south-central portion of the CCS (Not Automated). This well is an open-hole well, monitored at approximately 18 feet and 58 feet below land surface.	25	23	20.9	80	22	07.3
G-28	Tallahassee Rd, south of Model Lands basin (Not Automated). This well is an open-hole well, monitored at approximately 18 feet and 58 feet below land surface.	25	23	25.5	80	24	43.6
G-21	Tallahassee Rd, north ofModel Lands basin (Not Automated). This well is an open-hole well, monitored at approximately 18 feet and 58 feet below land surface.	25	25	34.8	80	24	42.9

[62-520.600]

4. The following parameters shall be analyzed for monitoring wells identified in Permit Condition I.3. Results shall be reported in accordance with Permit Conditions II.D.3:

Parameter*	Units	Sample Type	Monitoring Frequency
Temperature	Deg F	Automated**	Hourly
Water Level Relative to NAVD	ft	Automated	Hourly
Specific Conductance	umhos/cm	Automated	Hourly
Salinity	PSU	Automated	Hourly
Fluid Density	g/cm^3	Automated	Hourly
pH	s.u.	Grab	Quarterly
Solids, Total Dissolved (TDS)	mg/L	Grab	Quarterly
Chloride (as Cl)	mg/L	Grab	Quarterly
Sodium, Total	mg/L	Grab	Quarterly
Calcium, Total	mg/L	Grab	Quarterly
Potassium, Total	mg/L	Grab	Quarterly
Iron, Total Recoverable	mg/L	Grab	Quarterly
Tritium[3]	pCi/L	Grab	Quarterly
Nitrogen, Ammonia, Total (as N)	mg/L	Grab	Quarterly
Ammonium ion (NH_4^+)	mg/L	Grab	Quarterly
Ammonia, Total Unionized (as NH_3)	mg/L	Grab	Quarterly

[3] The permittee shall submit a summary of at least the latest twelve months of tritium results available by November of each year in lieu of submitting the results on a discharge monitoring report.

Parameter*	Units	Sample Type	Monitoring Frequency
Nitrite plus Nitrate, Total (as N)	mg/L	Grab	Quarterly
Nitrogen, Kjeldahl, Total (as N)	mg/L	Grab	Quarterly
Nitrogen, Total	mg/L	Grab	Quarterly
Phosphorus, Total (as P)	mg/L	Grab	Quarterly
Phosphate, Ortho (as PO_4)	mg/L	Grab	Quarterly
Boron, Total Recoverable	mg/L	Grab	Semi-Annually
Magnesium, Total Recoverable	mg/L	Grab	Semi-Annually
Sulfate, Total	mg/L	Grab	Semi-Annually

[62-520.600(11)(b)]

*The above listed parameters are report except for Nitrite plus Nitrate, Total (as N), which has a limit of 10 mg/L in samples collected from monitoring wells TPGW-1, and TPGW-18.

** Because L and G wells are not automated, grab samples shall be collected.

5. In accordance with Chapter 62-160, F.A.C., records of the sampling protocol shall be maintained on-site for each monitoring well. This record shall include water level, total depth of the well, volume of water in the well, volume of water removed (during analytic sampling), stabilization documentation including pH, conductivity, and temperature; time interval of purging; time sample is taken; and device(s) used for purging (including discharge rate) and sampling. All records shall be kept on site and made available to the Department upon request.

6. In the event the water quality monitoring shows an exceedance of the applicable water quality standards for N, the permittee shall arrange for a confirmation re-sampling within 15 days after the permittee's receipt of laboratory results. If the initial results demonstrate or the re-sampling confirms groundwater exceedances, the permittee shall notify the Department in writing within 14 days of this finding.

7. During well sampling, water levels shall be measured on the sample day and recorded prior to evacuating the wells or collecting samples. Water level, top of well casing and land surface elevations at each well site, at a precision of plus or minus 0.01 feet using a consistent, nationally recognized datum, shall be reported on each analysis report. Prior to sampling, the field parameters shall be stabilized from each well. Sampling and purging methods in the SOPs, as allowed in Chapter 62-160, F.A.C., must be used. *[62-520.600(11)(c)]*

8. Analyses shall be conducted on unfiltered samples, unless filtered samples have been approved by the Department's Southeast District Office as being more representative of groundwater conditions. *[62-520.310(5)]*

9. If any monitoring well becomes damaged or inoperable, the permittee shall notify the Department's Southeast District Office immediately and a detailed written report shall follow within seven days. The written report shall detail what problem has occurred and remedial measures that have been taken to prevent recurrence. All monitoring well design and replacement shall be approved by the Department's Southeast District Office prior to installation. *[62-520.600(6)(l)]*

10. All wells shall be plugged and abandoned in accordance with subsection 62-532.500(5), F.A.C., unless future use is intended. *[62-532.500(5)]*

11. The permittee shall provide verbal notice to the Department as soon as practical after discovery of a sinkhole within an area for the management or application of wastewater or sludge. In accordance with permit condition IX.20, the permittee shall immediately implement measures to control the entry of contaminants into waters.

II. SURFACE WATER EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Surface Water Monitoring

1. Point source discharges, as defined in subsection 62-620.200(37), F.A.C., from the facility to surface waters of the State are not authorized under this permit.

2. The permittee shall not increase the temperature of the surrounding surface water bodies beyond the CCS periphery so as to cause substantial damage or harm to the aquatic life or vegetation therein or interfere with beneficial uses assigned to the surface water bodies. *[62-302.520(1)(a)]*

3. During the period of operation authorized by this permit, the permittee shall sample surface waters at surface water monitoring sites, designated as **Surface Water Monitoring Group D-01A,** as specified below and reported in accordance with Permit Condition II.D.3:

			Monitoring Requirements					
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Temperature, Water	Deg F	Max Max	Report Report	Daily Maximum Monthly Average	Monthly	Instantaneous	SWD-2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	
pH	s.u.	Max Min	Report Report	Daily Maximum Daily Minimum	Quarterly	Grab or Instantaneous	SWD-2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	
Solids, Total Dissolved (TDS)	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	
Salinity	PSU	Max	Report	Daily Maximum	Monthly	Instantaneous	SWD- 8, 9, 10, 11, 12	
				Monthly Average	Monthly	Calculated	SWD-1	
				Monthly Average	Monthly	Instantaneous	SWD-8, 9, 10, 11, 12	
Specific Conductance	umhos/cm	Max	Report	Daily Maximum	Quarterly	Instantaneous	SWD-2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	
Turbidity	NTU	Max	Report	Daily Maximum	Quarterly	Grab	SWD-8, 9, 10	
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	
Ammonia, Total Unionized (as NH_3)	mg/L	Max	Report	Daily Maximum	Quarterly	Calculated	SWD-2, 3, 4, 5, 6, 7, 11, 12	
Ammonium ion (NH_4^+)	mg/L	Max	Report	Daily Maximum	Quarterly	Calculated	SWD-2, 3, 4, 5, 6, 7, 11, 12	
Nitrite plus Nitrate, Total (as N)	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7, 11, 12	
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7, 11, 12	
Nitrogen, Total	mg/L	Max	Report	Single Sample	Quarterly	Calculated	SWD-2, 3, 4, 5, 6, 7, 11, 12	
Phosphate, Ortho (as PO_4)	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7, 11, 12	
Phosphorous, Total	mg/L	Max	Report	Single Sample	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7, 11, 12	
Chlorophyll *a*	µg/L	Max	Report	Daily Maximum	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	
Copper, Total Recoverable	µg/L	Max	Report	Daily Maximum	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7	
Iron, Total Recoverable	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7	
Zinc, Total Recoverable	µg/L	Max	Report	Daily Maximum	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7	
Boron, Total Recoverable	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7	
Chlorides (as Cl)	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7	
				Monthly Average	Monthly	Calculated	SWD-1	

			Monitoring Requirements					
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Magnesium, Total Recoverable	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7	
Sodium, Total	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7	
Sulfate, Total	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7	
Tritium[4]	pCi/L	Max	Report	Daily Maximum	Quarterly	Grab	SWD-2, 3, 4, 5, 6, 7, 11, 12	

4. Surface water samples shall be taken at the monitoring locations described below for the parameters listed in Permit Condition II.A.3.:

Monitoring Site Number	Sample Station ID	Location	Latitude			Longitude		
			o	'	"	o	'	"
SWD-1	--	The average of the following six salinity and chlorides monitoring locations in Biscayne Bay (TPBBSW-3, TPBBSW-4, TPBBSW-5, TPBBSW-7, TPBBSW-10, TPBBSW-14).						
SWD-2	TPBBSW-3 (bottom and top)	Biscayne Bay	25	23	49.38	80	18	14.82
SWD-3	TPBBSW-4 (bottom and top)	Biscayne Bay	25	20	40.34	80	19	43.90
SWD-4	TPBBSW-5 (bottom and top)	Biscayne Bay	25	19	13.69	80	22	1.70
SWD-5	TPBBSW-7T (bottom and top)	Biscayne Bay near Turtle Point Canal Dam	25	25	9.99	80	19	42.15
SWD-6	TPBBSW-10 (bottom and top)	Biscayne Bay	25	26	27.83	80	19	22.92
SWD-7	TPBBSW-14 (bottom and top)	Biscayne Bay	25	25	15.50	80	19	34.50
SWD-8	TPSWC-1B (bottom) TPSWC-1T (top)	L-31E Canal	25	25	58.44	80	21	11.87
SWD-9	TPSWC-2B (bottom) TPSWC-2T (top)	L-31E Canal	25	24	21.20	80	21	46.30
SWD-10	TPSWC-3B (bottom) TPSWC-3T (top)	L-31E Canal	25	22	10.47	80	22	33.00
SWD-11	TPSWC-4B (bottom) TPSWC-4T (top)	S-20 Canal	25	21	24.10	80	22	3.00
SWD-12	TPSWC-5B (bottom) TPSWC-5T (top)	Card Sound Canal at Hotel 2 Dam	25	21	24.62	80	20	18.70

5. Top samples shall be collected 0.5 m below the water surface. Bottom samples shall be collected 0.5 m above the sediment. Bottom samples may be modified to avoid sediment in samples.

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 release non-process wastewater, consisting of OTCW, AECW, cooling tower

[4] The permittee shall submit a summary of at least the latest twelve months of tritium results available by November of each year in lieu of submitting the results on a discharge monitoring report.

blowdown, LVW, and stormwater. LVW consists of chemical treatment system wastewater, heat recovery steam generator blowdown, reverse osmosis concentrate, and condensate polishing system backwash water. Stormwater from equipment and containment areas is treated via oil/water separators prior to entering the CCS, as indicated in the permit renewal application, from **Internal Outfall I-001** to the on-site feeder canal within the CCS. Such releases shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition II.D.3:

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Temperature, Water	Deg F	Max Max	Report Report	Daily Maximum Monthly Average	Monthly	Instantaneous	OUI-1	
Solids, Total Suspended	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	OUI-1	
Biochemical Oxygen Demand (BOD)	mg/L	Max	Report	Daily Maximum	Monthly	Grab	CAL-1	
Dissolved Oxygen (DO), % Saturation	Percent	Min	Report	Monthly Average	Monthly	Calculated	CAL-1	
Oxygen Reduction Potential	mv	Max	Report	Daily Maximum	Monthly	Meter	CAL-1	
pH	s.u.	Max Min	Report Report	Daily Maximum Daily Minimum	Quarterly	Grab	OUI-1	
Color	PCU	Max	Report	Daily Maximum	Monthly	Grab	OUI-1	
Solids, Total Dissolved	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	OUI-1	
Salinity	PSU	Max	Report	Daily Maximum	Monthly	Grab	CAL-1, OUI-2	See II.B.4
				Monthly Average	Monthly	Grab	CAL-1	
			Report	Annual Average	Daily	Grab	CAL-1, OUI-2	
Specific Conductance	µmhos/cm	Max	Report	Daily Maximum	Quarterly	Grab	CAL-1	
Turbidity	NTU	Max	Report	Daily Maximum	Quarterly	Grab	CAL-2	
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	OUI-1, CAL-1	
Ammonia, Total Unionized (as NH_3)	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	OUI-1, CAL-1	
Ammonium ion (NH_4^+)	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	OUI-1, CAL-1	
Nitrite plus Nitrate, Total (as N)	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	OUI-1, CAL-1	
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	OUI-1, CAL-1	
Nitrogen, Total	mg/L	Max	Report	Single Sample	Quarterly	Calculated	OUI-1, CAL-1	
Phosphate, Ortho (as PO_4)	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	OUI-1, CAL-1	
Phosphorous, Total	mg/L	Max	Report	Single Sample	Quarterly	Grab	OUI-1, CAL-1	
Chlorophyll *a*	µg/L	Max	Report	Daily Maximum	Quarterly	Grab	OUI-1, CAL-1	
Copper, Total Recoverable	µg/L	Max	Report	Daily Maximum	Semi-annually	Grab	OUI-1, CAL-1	
Iron, Total Recoverable	mg/L	Max	Report	Daily Maximum	Semi-annually	Grab	OUI-1, CAL-1	
Zinc, Total Recoverable	µg/L	Max	Report	Daily Maximum	Semi-annually	Grab	OUI-1, CAL-1	
Boron, Total Recoverable	mg/L	Max	Report	Daily Maximum	Semi-annually	Grab	OUI-1	

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Chlorides (as Cl)	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	OUI-1	
Magnesium, Total Recoverable	mg/L	Max	Report	Daily Maximum	Semi-annually	Grab	OUI-1	
Sodium, Total	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	OUI-1	
Sulfate, Total	mg/L	Max	Report	Daily Maximum	Semi-annually	Grab	OUI-1	
Sulfide, Total	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	CAL-1	
Tritium[5]	pCi/L	Max	Report	Daily Maximum	Quarterly	Grab	OUI-1	

2. Samples shall be taken at the monitoring locations described below for the parameters listed in Permit Condition II.B.1.:

Monitoring Site Number	Sample Station ID	Location	Latitude			Longitude		
			º	'	"	º	'	"
OUI-1	--	Cooling water discharge prior to entering the feeder canal to the CCS	25	26	00.60	80	20	15.64
CAL-1	--	--	Average of CCS monitoring sites OUI-2, -3, -4, -5, -6, -7, and -8.					
CAL-2	--	--	Average of CCS monitoring sites OUI-2, -4, -7, and -8.					
OUI-2	TPSWCCS-1	Northwest corner of the CCS	25	25	56.0	80	21	00.8
OUI-3	TPSWCCS-2	Central portion of the CCS	25	23	39.0	80	21	06.7
OUI-4	TPSWCCS-3	Southwestern portion of the CCS	25	21	52.4	80	22	02.4
OUI-5	TPSWCCS-4	Southern portion of the CCS near the Hotel 2 Dam	25	21	25.3	80	20	23.1
OUI-6	TPSWCCS-5	East-central portion of the CCS	25	23	18.4	80	19	54.4
OUI-7	TPSWCCS-6	Northeastern portion of the CCS	25	25	56.2	80	19	40.2
OUI-8	TPSWCCS-7	West-central portion of the CCS	25	24	07.6	80	21	39.4

3. The daily salinity readings from the CCS and Biscayne Bay shall be compiled each month to create a monthly average for each of the CCS and Biscayne Bay.

4. FPL shall, when monitoring the salinity levels in the CCS, utilize all available monitoring resources in the CCS to obtain the average annual salinity rate. Specific monitoring points may not be excluded from the calculation unless such exclusion is allowed by the Department based upon a scientific reason. For the purposes of determining average annual salinities for the CCS, FPL shall use qualified hourly data (pursuant to the approved 2009 Monitoring Plan QAPP) from each of the CCS monitoring sites TPSWCCS-1, 2, 3, 4, 5, 6, and 7 collected beginning at 00:00 through 23:59 each day. The qualified hourly data for the day will be summed and divided by the number of qualified hourly values for the station that day. Stations with fewer than 12 qualified hourly data values in a given day shall not be used in the calculation of the CCS daily average. The daily averages for all qualified stations (up to seven per day) for a given day will be summed and divided by the number of qualified stations for that day to produce a qualified CCS daily average salinity value. The average annual salinity is calculated by summing the qualified CCS daily average salinity values from June 1st through May 31st and dividing the value by the number of days in the year. *[Consent Order OGC File Number 16-0241, paragraph 29.j]*

[5] The permittee shall submit a summary of at least the latest twelve months of tritium results available by November of each year in lieu of submitting the results on a discharge monitoring report.

5. The permittee shall submit to the Tallahassee Industrial Wastewater Program a copy of the Turkey Point Annual Crocodile Monitoring Report, and a copy of the Ecological Monitoring section and associated data contained in the Turkey Point Plant Annual Monitoring Report required by Conditions XVII.C and X, respectively, of the Conditions of Certification (License No. PA 03-45). In addition, the permittee shall provide a copy of comments or findings by those agencies charged with reviewing these reports under the Conditions of Certification.

C. Porewater Monitoring

1. During the period of operation authorized by this permit, the permittee shall sample porewater (free water present in sediments) from coastal marine wetlands north, east, and south of the CCS from monitoring sites, designated as **Surface Water Outfall D-02A,** at locations described below in accordance with the protocols set forth in FPL's Quality Assurance Project Plan dated 2013:

Porewater Monitoring ID	Description of Monitoring Location	Latitude			Longitude		
PW M1-2	Coastal marine wetlands; ½ mile north of power block	25	26	49.8	80	19	57.7
PW M2-2	Coastal marine wetlands; east of CCS, 2 miles south of power block	25	24	18.8	80	19	47.6
PW M3-2	Coastal marine wetlands; east of CCS, 3.4 miles south of power block	25	23	4.2	80	19	40.6
PW M4-2	Coastal marine wetlands; southeast corner of CCS	25	21	16.8	80	19	44.9
PW M5-2	Coastal marine wetlands; south of CCS	25	20	56	80	20	33
PW M6-1	Coastal marine wetlands; west of Card Sound Road (background location)	25	17	40.1	80	23	46.8

2. During the period of operation authorized by this permit, the permittee shall sample porewater as specified below and reported in accordance with Permit Condition II.D.3.

Parameter*	Units	Sample Type	Monitoring Frequency
Temperature	Deg F	Grab	Semi-Annually
pH	s.u.	Grab	Semi-Annually

Specific Conductance	µmhos/cm	Grab	Semi-Annually
Salinity	PSU	Grab	Semi-Annually
Fluid Density	g/cm^3	Grab	Semi-Annually
Solids, Total Dissolved (TDS)	mg/L	Grab	Semi-Annually
Chloride (as Cl)	mg/L	Grab	Semi-Annually
Sodium, Total	mg/L	Grab	Semi-Annually
Calcium, Total	mg/L	Grab	Semi-Annually
Potassium, Total	mg/L	Grab	Semi-Annually
Boron, Total Recoverable	mg/L	Grab	Semi-Annually
Copper, Total Recoverable	ug/L	Grab	Semi-Annually
Iron, Total Recoverable	mg/L	Grab	Semi-Annually
Magnesium, Total Recoverable	mg/L	Grab	Semi-Annually
Zinc, Total Recoverable	ug/L	Grab	Semi-Annually
Sulfate, Total	mg/L	Grab	Semi-Annually
Tritium[5]	pCi/L	Grab	Semi-Annually
Nitrogen, Ammonia, Total (as N)	mg/L	Grab	Semi-Annually
Ammonium ion (as NH_4)	mg/L	Grab	Semi-Annually
Ammonia, Total Unionized (as NH_3)	mg/L	Grab	Semi-Annually

Nitrite plus Nitrate, Total (as N)	mg/L	Grab	Semi-Annually
Nitrogen, Kjeldahl, Total (as N)	mg/L	Grab	Semi-Annually
Nitrogen, Total (as N)	mg/L	Grab	Semi-Annually
Phosphorus, Total (as P)	mg/L	Grab	Semi-Annually
Phosphate, Ortho (as PO_4)	mg/L	Grab	Semi-Annually

D. Other Limitations and Monitoring and Reporting Requirements

1. The sample collection, analytical test methods, and method detection limits (MDLs) applicable to this permit shall be conducted using a sufficiently sensitive method to ensure compliance with applicable water quality standards and effluent limitations and shall be in accordance with Rule 62-4.246, Chapters 62-160 and 62-601, F.A.C., and 40 CFR 136, as appropriate. The list of Department established analytical methods, and corresponding MDLs and PQLs (practical quantitation limits), which is titled "FAC 62-4 MDL/PQL Table (April 26, 2006)" is available at http://www.dep.state.fl.us/labs/library/index.htm. The MDLs and PQLs as described in this list shall constitute the minimum acceptable MDL/PQL values and the Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those described above unless alternate MDLs and/or PQLs have been specifically approved by the Department for this permit. Any method included in the list may be used for reporting as long as it meets the following requirements:

   a. The laboratory's reported MDL and PQL values for the particular method must be equal or less than the corresponding method values specified in the Department's approved MDL and PQL list;

   b. The laboratory reported MDL for the specific parameter is less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Parameters that are listed as "report only" in the permit shall use methods that provide an MDL, which is equal to or less than the applicable water quality criteria stated in Chapter 62-302, F.A.C.; and

   c. If the MDLs 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 stated MDL shall be used.

   When the analytical results are below method detection or practical quantitation limits, the permittee shall report the actual laboratory MDL and/or PQL values for the analyses that were performed following the instructions on the applicable discharge monitoring report.

   Where necessary, the permittee may request approval of alternate methods or for alternative MDLs or PQLs for any approved analytical method. Approval of alternate laboratory MDLs or PQLs are not necessary if the laboratory reported MDLs and PQLs are less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Approval of an analytical method not included in the above-referenced list is not necessary if the analytical method is approved in accordance with 40 CFR 136 or deemed acceptable by the Department. *[62-4.246, 62-160]*

2. The permittee shall provide safe access points for obtaining representative influent and effluent samples which are required by this permit. *[62-620.320(6)]*

3. Monitoring requirements under this permit are effective on the first day of the second month following the effective date of the permit. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements, if any. During the period of operation authorized by this permit,

the permittee shall complete and submit to the Department Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e., monthly, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this permit. Unless specified otherwise in this permit, monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below. DMRs shall be submitted for each required monitoring period including periods of no release of wastewater.

4.

REPORT Type on DMR	Monitoring Period	Submit by
Monthly	first day of month – last day of month	28th day of following month
Quarterly	January 1 - March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	April 28 July 28 October 28 January 28
Semiannual	January 1 – June 30 July 1 – December 31	July 28 January 28
Annual	January 1 – December 31	January 28

The permittee shall use the electronic DMR system approved by the Department (EzDMR) and shall electronically submit the sample results as an attachment to the EzDMR submittal, in accordance with Permit Condition I.C.3., using the DEP Business Portal at http://www.fldepportal.com/go/, unless the permittee has a waiver from the Department in accordance with 40 CFR 127.15. Reports shall be submitted to the Department by the twenty-eighth (28th) of the month following the month of operation.

[62-620.610(18)]

5. Unless specified otherwise in this permit, all reports and other information required by this permit, including 24-hour notifications, shall be submitted to or reported to, as appropriate, the Department's Southeast District Office at the address specified below:

Florida Department of Environmental Protection
Southeast District
3301 Gun Club Road, MSC7210-1
West Palm Beach, Florida 33406

Phone Number - (561) 681- 6600
FAX Number - (561) 681-6755 (All FAX copies shall be followed by original copies.)

[62-620.305]

6. All reports and other information shall be signed in accordance with the requirements of Rules 62-620.305 and 62-620.310, F.A.C. *[62-620.305, 62-620.310]*

7. If there is no release of wastewater from internal outfall I-001 on a day when the facility would normally sample, the sample shall be collected on the day of the next release. *[62-620.320(6)]*

8. Wastewater shall not contain components that, alone or in combination with other substances or in combination with other components of the discharge:

a. Settle to form putrescent deposits; or
b. Produce color, odor, turbidity, or other conditions in such degree as to create a nuisance; or
c. Are acutely toxic; or
d. Are present in concentrations which are carcinogenic, mutagenic, or teratogenic to human beings or to significant, locally occurring, wildlife or aquatic species; or
e. Pose a serious danger to the public health, safety, or welfare.

[62-620.320(6)]

9. There shall be no release of polychlorinated biphenyl (PCB) compounds such as those commonly used for transformer fluid to the waters of the State or the CCS. The permittee shall dispose of all known PCB equipment, articles, and wastes either in accordance with:

   a. Department-issued permits governing soil thermal treatment (Chapter 62-713, F.A.C.) or Department-approved landfills provided the PCB concentrations meet the Florida landfill's permitted limit when concentrations are less than 50 ppm; or

   b. 40 CFR 761 when concentrations are greater than or equal to 50 ppm.

   [40 CFR Part 423.12(b)(2)]

10. Any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream that ultimately may be released to the CCS or waters of the State is prohibited unless specifically authorized elsewhere in a permit; except 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. In the event the permittee proposes to use water treatment chemicals, biocides, corrosion inhibitors, or additives not authorized in this permit, or not previously reported to the Department, that ultimately may be released to the CCS or waters of the State, the permittee shall notify the Department in writing a minimum of thirty (30) days prior to instituting the use of such product. The product shall not be used prior to a determination by the Department that a permit revision is not required or prior to Department approval. 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, depending on the test type, according to Section 12 of EPA document no. EPA-821-R-02-012 entitled, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters for Freshwater and Marine Organisms, Section 10 of EPA document no. EPA-821-R-02-013 entitled, Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms or Section 10 of EPA document no. EPA-821-R-02-014 entitled, Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, or most current addition)

    f. Product data sheet

    g. Product label

    A revision to this permit is not necessary for use of products equivalent to those authorized in this permit provided the equivalent products consist of the same active ingredients and the product is applied at the same location with the same or lower concentrations of the active ingredients at the outfall. The permittee is responsible for maintaining documentation on-site which demonstrates equivalency of any new water treatment products from another vendor or manufacturer with a different product name from those listed above.

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

12. The permittee shall not store soil or other similar erodible materials in a manner in which off-site runoff is uncontrolled, nor shall construction activities be conducted in a manner which produces uncontrolled off-site runoff unless such uncontrolled runoff has been specifically approved by the Department. "Uncontrolled" shall mean without sedimentation basin or other controls approved by the Department.

13. The permittee shall operate and maintain loading and unloading facilities in such a manner in order to preclude spillage of chemicals, etc., used at the facility, and shall take all actions necessary to clean-up and control any such spill which may occur.

14. Any water drained from the fuel oil storage tanks or other water which meets the definition of "Petroleum Contact Water" as defined in subsection 62-740.030(1), F.A.C., shall be disposed at a Department-approved facility in accordance with Chapter 62-740, F.A.C.

15. The permittee is authorized to utilize the following water treatment chemicals and biocides, or their equivalents, in the cooling water systems and other wastewater streams:

Chemical Name[6]	Purpose	Dosage (mg/L)	Units Treated	Frequency
Hydrazine	Normal Operation Oxygen Scavenger	40 - 500	3, 4	Daily
Hydrazine	Wet Layup Oxygen Scavenger	25 - 300	3, 4	Outages Only
Carbohydrazide	Oxygen Scavenger	25 - 100	3, 4	Outages Only
Carbohydrazide	Oxygen Scavenger	60 - 700	3, 4	Daily
Dimethylamine	pH Control	0.1 - 1.0	3, 4	Daily
Monoethanolamine	pH Control	3 - 6	3, 4	Daily
Lithium Hydroxide	pH Control for Reactor Coolant System	0 - 6	3, 4	As Needed
ROClean P111	Reverse Osmosis Membrane Cleaning	150 - 300	5	Batch
Sodium Molybdate	Corrosion Inhibitor – Recirculating Cooling System	160 - 1000	All	As Needed
Tolytriazole	Corrosion Inhibitor – Copper Control	10 - 100	All	As Needed
Sodium Nitrite	Corrosion Inhibitor – Recirculating Cooling System	50 - 1500	3, 4	As Needed
Sodium Hydroxide	pH Control - Recirculating Cooling System	Maintain pH 8.5 - 11	3, 4	As Needed
Sodium Hydroxide	Reverse Osmosis Operation	Maintain pH of 9.06	5	Monthly, Batch
Sodium Hydroxide	Reverse Osmosis pH Control	Maintain pH > 8.1	3, 4	Daily
Sodium Hypochlorite 12%	Cooling Tower Biocide	Maintain 0.2 - 1 residual	5	Daily
Sodium Hypochlorite	Disinfectant/Oxidizer	1-2	Plant General Use	As Needed
Sodium Hypochlorite	Oxidize Organics	1-2	Cooling Canals	As Needed
Versene 100 (EDTA)	Reverse Osmosis Membrane Cleaning	3000 - 5200	5	Batch
Citric Acid	Reverse Osmosis Membrane Cleaning	30,000	5	Batch
Hypersperse MDC704i	Reverse Osmosis Membrane Cleaning	2.5	5	Daily
ENDCOR UAN 9766 (Molybdate)	Auxiliary Equipment Cooling Water System	5 gal./mo. (solid)	5	As Needed
AZ8101 (Tolytriazole)	Auxiliary Equipment Cooling Water System	2.5 gal./mo. (solid)	5	As Needed
OPTISPERSE HP3100	Boiler Drum Corrosion Inhibitor	2 - 3	5	Daily
DEPOSITROL PY5200	Cooling Tower Deposit Control	1.3	5	Daily
DEPOSITROL BL5400	Cooling Tower Scale Inhibitor	0.75	5	Daily
Ammonium Hydroxide	pH Control	3 - 20	3, 4	Daily
Ammonium Hydroxide	Condensate and Feedwater pH Control	Maintain pH of 9.68	5	Daily
OPTISPERSE PWR6600	Iron Oxide Dispersant in Steam Gen.	0 - 1	3, 4	Outages Only
OPTISPERSE PWR6600	Iron Oxide Dispersant in Steam Gen.	< 10 ppb	3, 4	Daily
VITEC 3000	Reverse Osmosis Antiscalant – potable water supply	3	3, 4	Batch
Sodium Bisulfite 40%	Reverse Osmosis Dechlorination	2-3/1-2	3, 4	Daily
Sodium Bisulfite 40%	Dechlorination	1-2	Cooling Canals, Plant General Use	As Needed
Hydrogen Peroxide 50%	Reverse Osmosis Hydrogen Sulfide Mitigation – Well Water	7-10	3, 4	Daily
Vitec 5100	Reverse Osmosis Antiscalant	5	3, 4	Daily

[6] Andoamine and Optisperse PWR6000 are approved pending demonstration of the successful completion of the pilot studies.

Chemical Name[6]	Purpose	Dosage (mg/L)	Units Treated	Frequency
Vitec 1000	Reverse Osmosis Antiscalant	2	3, 4	Daily
Wood Flour	Condenser Tube Leak Temporary Repair	200 lb/min. (Max.) Less than 1000 lb/wk	3, 4	As Needed
Quaternary Ammonium Salt	Biological Fouling Control - Recirculating Cooling System	6 - 12	3, 4	As Needed
Gluteraldehyde	Biological Fouling Control - Recirculating Cooling System	250-500	3, 4	As Needed
MBC 215 (Isothiazolin)	Biological Fouling Control - Recirculating Cooling System	15	3, 4	As Needed
Sodium Dichromate	Corrosion Inhibitor for Emergency Diesel Gen. - Recirculating Cooling System	3500 - 4500	3, 4	As Needed
Sulfuric Acid 98%	pH Control for Water Treatment Plant to Degas CO_2	Maintain pH 6 - 7	3, 4	Daily
Sulfuric Acid	Cooling Tower pH Control	350	5	Daily
Boric Acid	Process Chemical for Chemical Volume Control System	0 - 2600	3, 4	As Needed
Aluminum-based Flocculents (such as Liquid Alum, Green Bullet, WALLFLOC 5050, or Equivalent)	Coagulation of Algae and Nutrients	250 (Max.)	Cooling Canals	As Needed
Xanthene Dyes or Equivalent (Yellow, Green, Red, or Violet Dyes)	Dye Studies for Leaks or Flow Monitoring	1	Plant General Use	As Needed

16. Hydrazine from plant layup water during overhauls and/or refueling outages shall be measured at the outlet from the unit being serviced. Sampling shall be once per day of discharge by grab sample at the maximum expected concentration. Results of sampling will be submitted to the Department upon request. To determine the hydrazine concentration being released to the CCS, the following equation shall be used:

$$\frac{\text{(B/S) Blowdown Flow} \times \text{(B/S) Hydrazine Concentration}}{\text{Once-through Cooling Water Flow}} = \text{Hydrazine concentration at the recirculating cycle cooling canal system}$$

*Where (B/S) refers to boiler or steam generator

In the event that any value exceeds 3.4 mg/L, the permittee shall immediately modify its release pattern and resample. The Department's Southeast District Office shall be notified of the situation in accordance with permit condition IX.20.

17. Non-discharging/Closed Loop Vehicle Wash Recycle System Requirements.

    a. No discharge of recycle system wastewater, including filter backwash water, is authorized to waters of the State or to groundwater.

    b. The operation of the rainwater diversion system, oil/water separator, and placard posting shall be addressed and included in the facility's Best Management Practices Pollution Prevention Plan (PLAN) in accordance with permit condition VII.

18. Nothing in this permit authorizes take for the purposes of the permittee's compliance with the federal Endangered Species Act. [40 CFR 125.98(b)(1)]

19. A revision to this permit is not necessary for the following activities:

    a. Structural changes that do not change the quality, nature, or quantity of the discharge of wastes or that do not cause water pollution; and

b. Construction, replacement or repair of components at the facility which does not change the permitted treatment works or the terms and conditions of this permit.

Records of these activities shall be kept by the permittee (activity description, start date and length of activity). The documentation shall be kept on-site in accordance with Permit Condition V.2, and made available to Department staff upon request. *[62-620.200(26)(a) and (b)]*

20. The facility will take reasonable actions to select appropriate laboratories with sufficient capacity to avoid delay in receiving results due to backlogs. If such delay occurs, the facility will make reasonable efforts to resolve those delays. *[Consent Order OGC File Number 16-0241, paragraph 30]*

III. SLUDGE, SOLIDS, AND VEGETATIVE MATTER MANAGEMENT REQUIREMENTS

1. The permittee shall be responsible for proper treatment, management, use, and disposal of its sludges. *[62-620.320(6)]*

2. Storage, transportation, and disposal of sludge/solids characterized as hazardous waste shall be in accordance with requirements of Chapter 62-730, F.A.C. *[62-730]*

3. Sludge or other solids generated from the facility shall be reused, reclaimed, or otherwise disposed of in accordance with the requirements of Chapter 62-701, F.A.C. Disposal of sludge in a solid waste disposal facility shall be in accordance with the requirements of Chapter 62-701, F.A.C. *[62-701]*

4. Vegetation and materials removed from intake screens and vegetation, sediments and sludge excavated from the CCS or basins must be properly stored on-site until they are disposed in accordance with requirements in Chapter 62-701, F.A.C., and other applicable State and Federal requirements.

5. The permittee shall keep records of the amount of industrial sludge, solids, and vegetative matter disposed, transported, or incinerated. If a person other than the permittee is responsible for sludge transporting, disposal, or incineration, the permittee shall also keep the following records:

   a. name, address and telephone number of any transporter, and any manifests or bill of lading used;

   b. name and location of the site of disposal, treatment or incineration;

   c. name, address, and telephone number of the entity responsible for the disposal, treatment, or incineration site.

IV. ADDITIONAL LAND APPLICATION REQUIREMENTS

Section IV is not applicable to this facility.

V. CONSTRUCTION, OPERATION AND MAINTENANCE REQUIREMENTS

1. During the period of operation authorized by this permit, the wastewater facilities shall be operated under the supervision of a person who is qualified by formal training and/or practical experience in the field of water pollution control. *[62-620.320(6)]*

2. The permittee shall maintain the following records and make them available for inspection on the site of the permitted facility.

   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 required by the permit for at least three years from the date the report was prepared;

c. Records of all data, including reports and documents, used to complete the application for this permit for at least three years from the date the application was filed;

d. Records of all disposal of vegetation and materials removed from intake screens and vegetation, sediments and sludge removed from wastewater and stormwater basins;

e. A copy of the current permit;

f. A copy of any required record drawings;

g. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from the date of the logs or schedules; and

h. All pertinent impoundment permits, design, construction, operation, and maintenance information, including but not limited to, plans, geotechnical and structural integrity studies, copies of permits, associated certifications by qualified, State-registered professional engineer, and regulatory approvals.

[62-620.350]

3. During the period of operation authorized by this permit, the wastewater facility shall, as part of the regular maintenance schedule, review the structural integrity of all outfalls, including all outfalls which have been taken out of service.

VI. SCHEDULES

1. The following improvement actions shall be completed according to the following schedule. The Plan shall be prepared and implemented in accordance with Part VII of this permit.

Improvement Action	Completion Date
1. Develop Best Management Practices Plan (Plan)	Effective date of permit plus 18 months
2. Implement Plan	Effective date of permit plus 30 months
3. Plan Summary	Effective date of permit plus 3 years

2. If the permittee plans to continue operation of this wastewater facility after the expiration date of this permit, the permittee shall submit an application for renewal no later than one-hundred and eighty days (180) prior to the expiration date of this permit. Application shall be made using the appropriate forms listed in Rule 62-620.910, F.A.C., including submittal of the appropriate processing fee set forth in Rule 62-4.050, F.A.C.

[62-620.335(1) and (2)]

3. The permittee shall submit to the Department's Tallahassee Industrial Wastewater Program an annual report by November of each year as described in permit condition VIII.G.1. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.) F.S., applicable portions of the report shall be signed and sealed by the professional(s) who prepared them.

4. The facility shall submit annually by November of each year, beginning the third year following permit issuance, a nutrient monitoring summary report based on at least 24 months of groundwater, surface water, and CCS monitoring data to the Department's Tallahassee Industrial Wastewater Program. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.) F.S., applicable portions of the report shall be signed and sealed by the professional(s) who prepared them. The report shall include by station and depth where specified:

a. Annual geometric mean (AGM) concentrations by nutrient parameter;

b. Arithmetic mean;

c. Percentiles including 25th, 75th, and 90th, number of samples collected by parameter; and

d. Evaluation of trends over the period of record by parameter.

6. In lieu of submitting the results on a discharge monitoring report, the permittee shall submit to the Department's Tallahassee Industrial Wastewater Program and Southeast District Office a summary of at least the latest twelve months of tritium results for all locations where tritium is monitored by November of each year. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.) F.S., applicable portions of the report shall be signed and sealed by the professional(s) who prepared them.

7. In lieu of submitting the results on a discharge monitoring report, the permittee shall submit to the Department's Tallahassee Industrial Wastewater Program and Southeast District Office a summary of at least the latest twelve months for all parameters listed in permit condition I.4 in all wells listed in permit condition I.3 by November of each year. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.) F.S., applicable portions of the report shall be signed and sealed by the professional(s) who prepared them.

8. The permittee shall notify the Department's Tallahassee Industrial Wastewater Program following completion of the scheduled January 1, 2019 demolition and fill of the solids settling basins that formerly serviced Units 1 and 2.

VII. BEST MANAGEMENT PRACTICES PLAN (PLAN)

A. General

Through implementation of the Plan the permittee shall prevent or minimize the generation and the potential for the release of pollutants (including mercury, copper, iron, zinc, and nutrients) from facility operations (including spillage, leaks, and material and waste handling and storage activities) to industrial wastewater and stormwater. The permittee must implement the provisions of the Plan required under this Part as a condition of this permit.

In accordance with Section 304(e) and 402(a)(2) of the Clean Water Act (CWA) as amended, 33 U.S.C. §§ 1251 et seq., and the Pollution Prevention Act of 1990, 42 U.S.C. §§ 13101-13109, the permittee must develop and implement the Plan for the facility covered by this permit, prepared in accordance with good engineering practices and in accordance with the factors outlined in 40 CFR §125.3(d)(2) or (3) as appropriate. Paragraph 62-620.100(3)(m), F.A.C., incorporates by reference 40 CFR 122.44(k), which contains guidelines for requiring Best Management Practices (BMPs) for facilities and activities regulated under Section 403.0885, F.S.

1. The Plan shall include industrial wastewater and stormwater BMPs. The Plan shall be consistent with the objectives in VII.B, Industrial Wastewater Best Management Practices, and VII.C, Stormwater Best Management Practices, and the general guidance contained in the publications entitled Guidance Manual for Developing Best Management Practices (BMPs) [EPA 833-B-93-004, October 1993]; Developing Your Stormwater Pollution Prevention Plan: A Guide for Industrial Operators [EPA 833-B-09-002, February 2009] or any subsequent revisions to these guidance documents.

2. The Plan shall specify the individual(s) or position(s) within the facility organization as members of a Plan Team that are responsible for developing the Plan and assisting the facility or operations manager in its implementation, maintenance, and revision. The Plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's Plan.

3. The Plan shall be documented in narrative form, shall include any necessary plot plans, drawings or maps, and shall be developed in accordance with good engineering practices. The Plan shall be organized and written with the following structure:

    a. Name and location of the facility.
    b. Statement of Plan policy.
    c. Structure, functions, and Standard Operating Procedures (SOPs) of the Plan committee.
    d. Specific industrial wastewater and stormwater management practices and SOPs, including, but not limited to, the following:
        1. modification of equipment, facilities, technology, processes, and procedures,
        2. reformulation or redesign of products,
        3. substitution of materials, and

4. improvement in management, inventory control, materials handling or general operational phases of the facility.

e. Risk identification and assessment.
f. Reporting of Plan incidents.
g. Materials compatibility.
h. Good housekeeping.
i. Preventative maintenance.
j. Inspections and records.
k. Security.
l. Employee training. The Plan shall identify periodic dates for training.

4. The Plan shall contain a written statement from corporate or facility management indicating management's commitment to the goals of the Plan program. The statement shall be publicized or made known to all facility employees. Management shall also provide training the individuals responsible for implementing the Plan.

5. The Plan shall be developed and implemented in accordance with the schedule contained in Part VI of this permit.

6. The Plan shall be signed by the permittee or their duly authorized representative in accordance with paragraphs 62-620.305(2)(a) and (b), F.A.C. The Plan shall be reviewed by appropriate facility staff and management. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.) F.S., applicable portions of the Plan shall be signed and sealed by the professional(s) who prepared them.

7. The permittee shall amend the Plan whenever there is a change in the facility or in the operation of the facility which materially increases the generation of pollutants or their release or potential release to industrial wastewater or stormwater. The permittee shall also amend the Plan, as appropriate, when plant operations covered by the Plan change. Any such changes to the Plan shall be consistent with the objectives and specific requirements listed below. All changes in the Plan shall be reported to the Department in writing.

8. At any time, if the Plan proves to be ineffective in achieving the general objective of preventing and minimizing the generation of pollutants and their release and potential release to industrial wastewater and stormwater or the specific requirements listed below, this permit or the Plan shall incorporate revised Plan requirements.

9. Progress/update reports documenting schedules and implementation of the Plan shall be maintained at the facility. The reports shall discuss whether implementation schedules were met and revise any schedules, as necessary. The Plan shall also be updated as necessary and the attainment or progress made toward specific pollutant reduction targets documented. Results of completed waste minimization assessment (WMA) studies shall be discussed. Results of any ongoing WMA studies, as well as any additional schedules for implementation of waste reduction practices, shall be included.

10. The permittee shall maintain the Plan, Progress/Update Reports, and other documents associated with the Plan at the facility and shall make these documents available to the Department upon request. All offices of the permittee which are required to maintain a copy of this NPDES permit shall also maintain a copy of the Plan.

11. The Department may notify the permittee at any time that the Plan does not meet one or more of the minimum requirements of this Part. Such notification shall identify those provisions of this permit which are not being met by the Plan, and identify which provisions of the Plan require~~s~~ modification~~s~~ in order to meet the minimum requirements of the Plan. Upon such notification, the permittee shall amend the Plan and shall submit to the Department a written certification that the requested changes have been made. Unless otherwise provided by the Department, the permittee shall have 30 days after such notification to make the changes necessary.

B. Industrial Wastewater Best Management Practices

1. The permittee shall develop and amend, as needed, the Plan consistent with the following objectives for the control of pollutants:

a. The number and quantity of pollutants and the toxicity of effluent generated, discharged or potentially discharged at the facility shall be minimized by the permittee to the extent feasible by managing each influent waste stream in the most appropriate manner.

b. Under the Plan, and any SOPs included in the Plan, the permittee shall ensure proper operation and maintenance of the treatment facility.

c. The permittee shall establish specific objectives for the control of pollutants by conducting the following evaluations:

(1) Each facility component or system shall be examined for its waste minimization opportunities and its potential for causing a release of amounts of pollutants to industrial wastewater and stormwater due to equipment failure, improper operation, and natural phenomena such as rain or adverse weather, etc. The examination shall include all normal operations and ancillary activities including but not limited to material storage areas, plant site runoff, in-plant transfer, process and material handling areas, loading or unloading operations, spillage or leaks, sludge and waste disposal, and drainage from raw material storage, as applicable.

(2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances to result in amounts of pollutants reaching surface waters, the program should include a prediction of the direction, rate of flow and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.

2. The Industrial Wastewater BMPs component of the Plan shall include, at a minimum, the following items:

a. A WMA for this facility to determine actions that could be taken to reduce waste loadings and chemical losses to all wastewater and/or stormwater streams as described Part VII.B.3, Required Components of a WMA, of this permit. It shall address both short-term and long-term opportunities for minimizing waste generation at this facility, utilizing at a minimum, applicable criteria selected from Part VII.B.3, particularly for high volume and/or high toxicity components of wastewater and stormwater streams. Initially, the WMA should focus primarily on actions that could be implemented quickly, thereby realizing tangible benefits to surface water quality. Long term goals and actions pertaining to waste reduction shall include investigation of the feasibility of eliminating toxic chemical use, instituting process changes, raw material replacements, etc.

The permittee shall implement each waste reduction practice recommended by the WMA as soon as practicable. Any waste reduction practices which are identified but will not be implemented shall be described in the required progress/update reports, along with the factors inhibiting their adoption. Any waste reduction practices which cannot be implemented immediately shall be described in the Plan and included in a schedule of implementation.

The permit issuing authority does not herein establish a time limit for completion of the WMA; the study may be conducted throughout the term of this permit. However, a suggested target completion date is six months after the effective date of this permit, so that the WMA results and recommended waste reduction practices may be incorporated into the Plan. Continual studies toward minimizing waste are encouraged.

Practices which reduce pollutant loading in wastewater or stormwater discharges with a consequent increase in solid hazardous waste generation, decrease in air quality, or adverse effect to groundwater shall not be considered waste reduction for the purposes of this assessment.

b. Specific BMPs to meet the objectives identified in Part VII.B.1 of this section, addressing each component or system capable of generating or causing a release of amounts of pollutants, and identifying specific preventative or remedial measures to be implemented.

3. Required Components of a WMA

a. The WMA shall include an overall plant water balance, as well as internal water balances, as necessary. This information shall be used to determine any opportunities for water conservation or reuse/recycling and to determine if and where leakages might occur.

b. A materials and risk assessment shall be developed and shall include the following:

1. Identification of the types and quantities of materials used or manufactured (including by products produced) at the facility;

2. Identification of the location and types of materials management activities which occur at the facility;
3. An evaluation of the following aspects of materials compatibility: containment and storage practices for chemicals, container compatibility, chemical mixing procedures; potential mixing or compatibility problems; and specific prohibitions regarding mixing of chemicals;
4. Technical information on human health and ecological effects of toxic or hazardous chemicals presently used or manufactured (including by products produced) or planned for future use or production; and
5. Analyses of chemical use and waste generation, including overall plant material balances and as necessary, internal process balances, for all pollutants. (When actual measurements of the quantity of a chemical entering a wastewater or stormwater stream are not readily available, reasonable estimates should be made based on best engineering judgment.) The analyses shall address reasons for using particular chemicals, and measures or estimates of the actual and potential chemical discharges via wastewater, wastewater sludge, stormwater, air, solid waste or hazardous waste media.

c. The WMA shall include, at a minimum, the following means of reducing pollutant discharges in wastewater streams or of otherwise minimizing wastes:
   (1) Process related source reduction measures, including any or all of the following, as appropriate:
      (a) Production process changes;
      (b) Improved process controls;
      (c) Reduction of off specification materials;
      (d) Reduction in use of toxic or hazardous materials;
      (e) Chemical modifications and/or material purification;
      (f) Chemical substitution employing non-toxic or less toxic alternatives; and
      (g) Equipment upgrades or modifications or changes in equipment use.
   (2) Housekeeping/operational changes, including waste stream segregation, inventory control, spill and leak prevention, equipment maintenance; and employee training in areas of material management and pollution prevention, good housekeeping, and spill prevention and response;
   (3) In process recycling, on-site recycling and/or off-site recycling of materials;
   (4) Following all source reduction and recycling practices, wastewater treatment process changes, including the use of new or improved treatment methods, such that treatment by products are less toxic to aquatic or human life; and
   (5) Other means as agreed upon by the permit issuing authority and the permittee.

d. For stormwater discharges and instances where stormwater enters the wastewater treatment/disposal system or is otherwise commingled with wastewater, the WMA shall evaluate the following potential sources of stormwater contamination, at a minimum:
   (1) Loading, unloading and transfer areas for dry bulk materials or liquids;
   (2) Outdoor storage of raw materials or products;
   (3) Outdoor manufacturing or processing activities;
   (4) Dust or particulate generating processes; and
   (5) On-site waste and/or sludge disposal practices.

   The likelihood of stormwater contact in these areas and the potential for spills from these areas shall be considered in the evaluation. The history of leaks or spills of toxic or hazardous pollutants shall also be considered. Recommendations for changes to current practices which would reduce the potential for stormwater contamination from these areas shall be made, as necessary.

C. Stormwater Best Management Practices

1. Stormwater BMPs components of the Plan shall include, at a minimum, the following items:

a. A description of potential sources which may reasonably be expected to add pollutants to stormwater discharges from separate stormwater conveyances at the facility. The Plan shall identify all activities and materials that may potentially be pollutant sources. The Plan shall include, at a minimum:

(1) Drainage
(a) A site map indicating an outline of the portions of the drainage area of each stormwater outfall that are within the facility boundaries, each existing structural control measure to reduce pollutants in stormwater runoff, surface water bodies, locations where materials are exposed to precipitation, locations where spills or leaks identified under Item VII.C.1.a.(3) have occurred, and the locations of the following activities where such activities are exposed to precipitation: fueling stations; vehicle and equipment maintenance and/or cleaning areas; loading/unloading areas; locations used for the treatment, storage or disposal of wastes; liquid storage tanks; processing areas; and storage areas.
(b) For each area of the facility that generates stormwater discharges associated with industrial activity with a reasonable potential for containing pollutants, a prediction of the direction of flow, and an identification of the types of pollutants which are likely to be present in stormwater discharges associated with industrial activity. Factors to consider include the toxicity of chemical; quantity of chemicals used, produced or discharged; the likelihood of contact with stormwater; and history of leaks or spills of toxic or hazardous pollutants. Flows with a potential for causing erosion shall be identified.

(2) An inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of materials that have been handled, treated, stored or disposed in a manner to allow exposure to stormwater between the time of three years prior to the effective date of this permit and the present; method and location of on-site storage or disposal; materials management practices employed to minimize contact of materials with stormwater runoff between the time of three years prior to the effective date of this permit and the present; the location and a description of existing structural and non-structural control measures to reduce pollutants in stormwater runoff; and a description of any treatment the stormwater receives.

(3) A list of spills and leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a stormwater conveyance at the facility after the date of three years prior to the effective date of this permit. Such a list shall be updated as appropriate during the term of this permit.

(4) A summary of existing discharge sampling data describing pollutants in stormwater discharges from the facility, including a summary of sampling data collected during the term of this permit.

(5) A narrative description of the potential pollutant sources from the following activities if applicable: loading and unloading operations; outdoor storage activities; outdoor manufacturing or processing activities; dust or particulate generating processes; loading/unloading areas; and on-site waste disposal practices. The description shall specifically list any potential source of pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g. biochemical oxygen demand, etc.) of concern shall be identified.

b. A description of stormwater management controls appropriate for the facility and implement such controls. The appropriateness and priorities of controls in the Plan shall reflect identified potential sources of pollutants at the facility. The description of stormwater management controls shall address the following minimum components, including a schedule for implementing such controls:

(1) Good housekeeping requires the maintenance of areas that may contribute pollutants to stormwater discharges in a clean, orderly manner.

(2) A preventive maintenance program shall involve timely inspection and maintenance of stormwater management devices (e.g. cleaning oil/water separators, catch basins) as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment and systems.

(3) Areas where potential spills that can contribute pollutants to stormwater discharges can occur and their accompanying drainage points shall be identified clearly in the Plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the Plan should be considered. Procedures for cleaning up spills shall be identified in the Plan and

made available to the appropriate personnel. The necessary equipment to implement a cleanup should be available to personnel.

(4) In addition to or as part of the comprehensive site evaluation required under paragraph VII.C.1.c of this section, qualified facility personnel shall be identified to inspect designated equipment and areas of the facility at appropriate intervals specified in the Plan. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained.

(5) Employee training programs shall inform personnel responsible for implementing activities identified in the Plan or otherwise responsible for stormwater management at all levels of responsibility of the components and goals of the Plan. Training should address topics such material management and pollution prevention, good housekeeping and spill prevention and response. The Plan shall identify periodic dates for such training.

(6) A description of incidents (such as spills, or other discharges), along with other information describing the quality and quantity of stormwater discharges shall be included in the Plan required under this part. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the Plan.

(7) Non-Stormwater Discharges

(a) The Plan shall include a certification that each "stormwater-only" discharge authorized under this permit has been tested or evaluated for the presence of non-stormwater discharges. (This section is not applicable to those discharges authorized under this permit that have been identified in the application as having non-stormwater components.) The certification shall include the identification of potential sources of non-stormwater at the site, a description of the results of any test and/or evaluation for the presence of non-stormwater discharges, the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the on-site drainage points that were directly observed during the test. Such certification may not be feasible if the facility operating the stormwater discharge associated with industrial activity does not have access to an outfall, manhole, or other point of access to the ultimate conduit that receives the discharge. In such cases, the source identification section of the Plan shall indicate why the certification required by this part was not feasible, along with the identification of potential sources of non-stormwater at the site. A discharger that is unable to provide the certification required by this paragraph must notify the Department in accordance with paragraph VII.C.1.b.(7)(c) below.

(b) Except for flows from fire-fighting activities, sources of authorized non-stormwater discharges that are combined with stormwater discharges associated with industrial activity must be identified in the Plan. The Plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge.

(c) Failure to Certify. Any facility that is unable to provide the certification required (testing for non-stormwater discharges), must notify the Department. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification shall describe: the procedure of any test conducted for the presence of non-stormwater discharges; the results of such test or other relevant observations; potential sources of non-stormwater discharges to the storm sewer; and why adequate tests for such storm sewers were not feasible. Non-stormwater discharges to surface waters of the State which are not authorized by an NPDES permit are unlawful, and must be terminated or dischargers must submit appropriate NPDES permit application forms.

(8) The Plan shall identify areas which, due to topography, activities, or other factors, have a high potential for soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion.

(9) The Plan shall contain a narrative consideration of the appropriateness of traditional stormwater management practices (practices other than those which control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage stormwater runoff in a manner that reduces pollutants in stormwater discharges from the site. The Plan shall provide that those measures that the permittee determines to be reasonable and appropriate shall be implemented and maintained. The potential of various sources at the facility to contribute pollutants to stormwater discharges associated with industrial activity shall be considered when determining reasonable and appropriate measures. Appropriate measures may include: vegetative swales and practices; reuse of collected stormwater (such as for a process or as an irrigation source); inlet controls (such as oil/water separators); infiltration devices; and, detention or retention devices.

c. A Comprehensive Site Compliance Evaluation. Qualified personnel shall conduct site compliance evaluations at appropriate intervals specified in the Plan, but in no case less than once a year. Such evaluations shall provide:
   (1) Areas contributing to a stormwater discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of this permit or whether additional control measures are needed. Structural stormwater management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the Plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the Plan, such as spill response equipment, shall be made.
   (2) Based on the results of the inspection, the description of potential pollutant sources identified in the Plan in accordance with paragraph VII.C.1.a.(5) of this section and pollution prevention measures and controls identified in the Plan in accordance with paragraph VII.C.1.b of this section shall be revised as appropriate within two weeks of such inspection and shall provide for implementation of any changes to the Plan in a timely manner, but in no case more than twelve weeks after the inspection.
   (3) A report summarizing the scope of the inspection, personnel making the inspection, the date(s) of the inspection, observations relating to the implementation of the Plan and actions taken shall be made and retained as part of the Plan. The report shall identify any incidents of non-compliance, and corrective actions taken. Where a report does not identify any incidents of non-compliance, the report shall contain a certification that the facility is in compliance with the Plan and this permit. The report shall be signed in accordance with paragraph VII.A.6 of this section.

d. Consistency with other plans. The Plan may reference the existence of other plans for Spill Prevention Control and Countermeasure (SPCC), plans developed for the facility under section 311 of the CWA or BMP Programs otherwise required by an NPDES permit for the facility if such requirement is incorporated into the Plan.

VIII. OTHER SPECIFIC CONDITIONS

A. Specific Conditions Applicable to All Permits

1. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.), F.S., applicable portions of reports that must be submitted under this permit shall be signed and sealed by a State-registered professional engineer or professional geologist, as appropriate. *[62-620.310(4)]*

2. Drawings, plans, documents or specifications submitted by the permittee, not attached hereto, but retained on file at the Department's Industrial Wastewater program in Tallahassee, are made a part hereof.

3. 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. 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:

   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; or

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.

[62-620.625(1)]

C. Duty to Reapply

1. The permittee is not authorized to release wastewater into the CCS after the expiration date of this permit, unless:

   a. the permittee has applied for renewal of this permit at least 180 days before the expiration date (**Month, Day, Year**) using the appropriate forms listed in Rule 62-620.910, F.A.C., and in the manner established in the Department of Environmental Protection Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., including submittal of the appropriate processing fee set forth in Rule 62-4.050, F.A.C.; or

   b. the permittee has made complete the application for renewal of this permit before the permit expiration date.

   [62-620.335(1)-(4)]

2. When publishing Notice of Draft and Notice of Intent in accordance with Rules 62-110.106 and 62-620.550, F.A.C., the permittee shall publish the notice at its expense in a newspaper of general circulation in the county or counties in which the activity is to take place either

   a. Within thirty days after the permittee has received a notice; or

   b. Within thirty days after final agency action.

   Failure to publish a notice is a violation of this permit.

D. Reopener Clauses

1. The permit shall be revised, or alternatively, revoked and reissued in accordance with the provisions contained in Rules 62-620.325 and 62-620.345 F.A.C., if applicable, or to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2) and 307(a)(2) of the CWA, as amended, if the effluent standards, limitations, or water quality standards so issued or approved:

   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 revised or reissued under this paragraph shall contain any other requirements then applicable.

2. The permit may be reopened to adjust effluent limitations or monitoring requirements should future Water Quality Based Effluent Limitation determinations, water quality studies, Department approved changes in water quality standards, EPA established Total Maximum Daily Loads (TMDLs), or other information show a need for a different limitation, monitoring requirement, or more stringent requirements.

3. The Department or EPA may develop a TMDL during the life of the permit. Once a TMDL has been established and adopted by rule, the Department shall revise this permit to incorporate the final findings of the TMDL.

4. The permittee and the Department entered into a Consent Order (OGC File #16-0241) on June 20, 2016. The Department may revise the permit to include certain provisions of the Consent Order upon its completion.

E. Impoundment Design, Construction, Operation, and Maintenance

1. All impoundments used to hold or treat wastewater and stormwater, including the CCS, shall be designed, constructed, operated, and maintained to prevent the discharge of pollutants to waters of the State, except as authorized under this permit.

2. Design, construction, operation, and maintenance of any impoundment shall be in accordance with all relevant State and Federal regulations and shall be certified by a qualified, State-registered professional engineer and permitted and inspected by the appropriate agency prior to use. When practicable, piezometers or other instrumentation shall be installed as a means to aid monitoring of impoundment integrity.

3. In addition to other regular maintenance activities conduction for the CCS, which for the purposes of this section is considered an impoundment, the perimeter berms and slopes shall be maintained to protect the structural integrity. This may include removal of trees greater than 4 inches in diameter.

F. Impoundment Inspections

1. The CCS periphery including the three small dams (Hotel 2, Turtle Point Canal, and the Cellular Cofferdam) shall be inspected above and below the surface waterline for the entire perimeter at a minimum of once every five years by an independent qualified, State-registered professional engineer. The three dams and all other aspects of the perimeter impoundments shall be inspected annually by a qualified, State-registered professional engineer. All impoundments other than the CCS shall be inspected at least monthly by qualified personnel. The term qualified means having successfully completed the Mine Safety and Health Administration Qualification for Impoundment Inspection course in addition to the Annual Retraining for Impoundment Qualification, or equivalent Qualifications. Additional inspections by qualified personnel shall be done within 7 days after large or extended rain events (i.e., 10-year, 24-hour precipitation event).

2. Inspections shall, at a minimum, include observations of dams, including the three dams (Hotel 2, Turtle Point Canal and the Cellular Cofferdam) of the CCS, dikes and toe areas for erosion, corrosion, cracks or bulges, seepage, wet or soft soil, changes in geometry, the depth and elevation of the impounded water, sediment or slurry, freeboard, changes in vegetation such as overly lush, dead or unnaturally tilted vegetation, and any other changes which may indicate a potential compromise to impoundment integrity.

   To monitor function of the cathodic protection system, suggested operation and maintenance practices described in the Operation and Maintenance Manual accompanying these devices shall be followed.

   In addition, the CCS shall be monitored in the months of April and August of each year to determine its thermal efficiency. The thermal efficiency in the CCS shall be calculated as described in the Turkey Point Cooling Canal System Thermal Efficiency Plan. If the permittee fails to achieve a minimum annual average of 70 percent, the permittee shall, within 30 days of discovering that the thermal efficiency is below the threshold, commence actions prescribed in the Turkey Point Cooling Canal System Thermal Efficiency Plan. If the permittee fails to reach the threshold by the following annual report, within 30 days, the permittee shall notify the Tallahassee Industrial Wastewater Program of additional measures to be taken, and a timeframe for achieving the threshold. The Turkey Point Cooling Canal System Thermal Efficiency Plan shall be updated to include the additional measures.

   The findings of each inspection including thermal efficiency, shall be documented in a written annual inspection report as described in permit condition VIII.G.1 below.

3. Remediation Measures. Within 24 hours of discovering changes that indicate a potential compromise to the structural integrity or the efficient operation of the CCS, the permittee shall begin procedures to remediate the problem. Adherence to the six components of the Turkey Point Cooling Canal System Thermal Efficiency Plan dated December 14, 2016, shall be incorporated into the facility's best management practices.

4. Within 5 days of discovering any changes in the CCS that indicate a potential compromise to the structural integrity or operation, the permittee must notify the Department in writing describing the findings of the inspection, corrective measures taken since discovery of the change, other planned corrective measures and the expected outcomes. Failure to do so will be a violation of this permit.

5. Other issues which may have long term impacts on integrity, such as trees growing on the CCS or banks or vegetation blocking canals or spillways, shall be cleared within thirty days of first observation.

6. During routine operational and maintenance activities around the CCS, periodic observation of the perimeter should continue reporting noted defects.

G. Reporting and Recordkeeping Requirements

1. In accordance with schedule item VI.4 the permittee shall submit an annual report of all impoundment inspections and maintenance activities, including corrective actions made in response to inspections, summarizing findings of all monitoring activities including the annual thermal efficiency evaluation of the CCS, remediation measures pertaining to the structural integrity, design, construction, and operation and maintenance of the CCS, and all other activities undertaken to repair or maintain the CCS and other impoundments.

2. In accordance with Section 403.077, F.S., unauthorized releases or spills reportable to the StateWatch Office pursuant to permit condition IX.20 shall also be reported to the Department within 24 hours from the time the permittee becomes aware of the discharge. The permittee shall provide to the Department information reported to the State Watch Office. Notice of unauthorized releases or spills may be provided to the Department through the Department's Public Notice of Pollution web page at https://floridadep.gov/pollutionnotice.

   a. If, after providing notice pursuant to paragraph (2) above, the permittee determines that a reportable unauthorized release or spill did not occur or that an amendment to the notice is warranted, the permittee may submit a letter to the Department documenting such determination.

   b. If, after providing notice pursuant to paragraph (2) above, the permittee discovers that a reportable unauthorized release or spill has migrated outside the property boundaries of the installation, the permittee must provide an additional notice to the Department that the release has migrated outside the property boundaries within 24 hours after its discovery of the migration outside of the property boundaries.

H. Specific Conditions Related to Preservation of State Historical Resources

1. If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are discovered at any time within the project site area, the permittee shall immediately notify the Florida Department of State, Division of Historical Resources, Compliance Review Section at (850) 245-6333, to determine appropriate action.

2. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes.

IX. 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 Section 403.087(7), 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 plans 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)]*

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, F.S., or Rule 62-620.302, F.A.C. 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 or activity and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. *[62-620.610(15)]*

16. The permittee shall apply for a revision to the Department permit in accordance with Rule 62-620.300, F.A.C., and the Department of Environmental Protection Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with subsection 62-620.325(2), F.A.C., 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 and Chapters 62-160, 62-601, and 62-610, 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 DMR, DEP Form 62-620.910(10), or as specified elsewhere in the permit.

    b. If the permittee monitors any contaminant 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. Except as specifically provided in Rule 62-160.300, F.A.C., any laboratory test required by this permit shall be performed by a laboratory that has been certified by the Department of Health Environmental Laboratory

Certification Program (DOH ELCP). Such certification shall be for the matrix, test method and analyte(s) being measured to comply with this permit.

e. Field activities including on-site tests and sample collection shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in Chapter 62-160, F.A.C.

f. Alternate field procedures and laboratory methods may be used where they have been approved in accordance with Rules 62-160.220, and 62-160.330, F.A.C.

[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's Southeast District Office 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.

    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 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 groundwaters.

    b. Oral reports as required by this subsection shall be provided as follows:
        (1) For unauthorized releases or spills of treated or untreated wastewater reported pursuant to subparagraph 20(a).4. that are in excess of 1,000 gallons per incident, or where information indicates that public health or the environment will be endangered, oral reports shall be provided to the STATE WATCH POINT OFFICE TOLL FREE NUMBER (800) 320-0519, as soon as practical, but no later than 24 hours from the time the permittee becomes aware of the discharge. The permittee, to the extent known, shall provide the following information to the State Watch Point:
            (a) Name, address, and telephone number of person reporting;
            (b) Name, address, and telephone number of permittee or responsible person for the discharge;
            (c) Date and time of the discharge and status of discharge (ongoing or ceased);
            (d) Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater);
            (e) Estimated amount of the discharge;
            (f) Location or address of the discharge;
            (g) Source and cause of the discharge;
            (h) Whether the discharge was contained on-site, and cleanup actions taken to date;
            (i) Description of area affected by the discharge, including name of water body affected, if any; and
            (j) Other persons or agencies contacted.
        (2) Oral reports, not otherwise required to be provided pursuant to subparagraph 20.b.1 above, shall be provided to the Department's Southeast District Office within 24 hours from the time the permittee becomes aware of the circumstances.

    c. 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's Southeast District Office shall waive the written report.

[62-620.610(20)]

21. The permittee shall report all instances of noncompliance not reported under Permit Conditions IX. 17, 18 or 19 of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Permit Condition IX.20 of this permit. *[62-620.610(21)]*

22. Bypass Provisions.

    a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment works.

    b. 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 Permit Condition IX.22.c. of this permit.

    c. 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 Permit Condition IX.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.

    d. 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 Permit Condition IX. 22.b.1 through 3 of this permit.

    e. 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 provisions of Permit Condition IX.22.a. through c. of this permit.

    [62-620.610(22)]

23. Upset Provisions.

    a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee.
       (1) An upset does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, careless or improper operation.
       (2) An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of upset provisions of Rule 62-620.610, F.A.C., are met.

    b. 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 Permit Condition IX.20. of this permit; and
       (4) The permittee complied with any remedial measures required under Permit Condition IX.20. of this permit.

    c. In any enforcement proceeding, the burden of proof for establishing the occurrence of an upset rests with the permittee.

    d. 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 DEPARTMENTOF
ENVIRONMENTAL PROTECTION

_____
Benjamin M. Melnick
Deputy Director
Division of Water Resource Management

FACT SHEET
FOR
STATE OF FLORIDA INDUSTRIAL WASTEWATER FACILITY PERMIT

PERMIT NUMBER: FL0001562 (Major)

NAME OF PERMITTEE: Florida Power & Light Company (FPL)

FACILITY NAME: Turkey Point Power Plant

FACILITY LOCATION: 9760 SW 344th St, Florida City, Florida 33035
Miami-Dade County

PERMIT WRITERS: Frank Wall, Engineering Specialist IV

Allan Stodghill, P.G., Professional Geologist II

Marc Harris, P.E., Environmental Administrator

Abbreviations and Acronyms

AADF	Annual Average Daily Flow
AGM	Annual geometric mean
BPJ	Best Professional Judgement
CCS	Cooling Canal System
CO	Consent Order
Deg F	Degrees Fahrenheit
EPA	United States Environmental Protection Agency
Ft	Feet
F.A.C.	Florida Administrative Code
FPL	Florida Power & Light Company
F.S.	Florida Statutes
g/cm^3	Grams per cubic centimeter
ICW	Intake Cooling Water
MW	Megawatts
ug/L	Microgram per liter
umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter
MGD	Million Gallons per Day
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Unit
NAICS	North American Industry Classification System
NAVD	North American Vertical Datum
NOV	Notice of Violation
OGC	Office of General Counsel
OTCW	Once-through Cooling Water
OFW	Outstanding Florida Water
pCi/L	Picocuries per liter
PCU	Platinum-Cobalt Unit
PSU	Practical Salinity Unit
P.E.	Professional Engineer
P.G.	Professional Geologist
SFWMD	South Florida Water Management District
SIC	Standard Industrial Classification
s.u.	Standard Units
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
USGS	United States Geological Survey

BACKGROUND

1. CHRONOLOGY OF APPLICATION

File Number:	FL0001562-012-IW1N
Application Submittal Date:	October 22, 2009
Additional Information:	March 12th, June 1st, August 16th, September 16th & December 13th, 2010; September 30th, 2016; February 10th & 22nd, April 24th, May 5th, August 16th & 29th & October 16th, 2017; August 3rd, September 11th & 14th, October 29th, November 5th, December 4th, 2018

2. FACILITY DESCRIPTION

Standard Industrial Classification (SIC) Code: 4911 - Electrical Generation.

316(b): The facility does not have any cooling water intake structures, and therefore, is not subject to Section 316(b) of the Clean Water Act.

North American Industry Classification System (NAICS): 221112 - Fossil Fuel Electric Power Generation, 221113 – Nuclear Electric Power Generation.

Existing Cooling Canal System Permitted Capacity: 2763 Million Gallons per Day (MGD) Annual Average Daily Flow (AADF)

Proposed Increase in Permitted Capacity: No increase

Proposed Total Permitted Capacity: 2763 MGD AADF

The Turkey Point facility, which began operation in 1967, is located on approximately 11,000 acres in unincorporated southeast Miami-Dade County about 25 miles south of Miami and about nine miles east of Florida City and Homestead (See Figure 1, FPL Turkey Point Location Map). Biscayne National Park, established in 1980, lies adjacent to eastern portions of the facility. The Biscayne Bay Aquatic Preserve, established in 1974, is southeast of the facility. Everglades National Park, established in 1934, is to the south and west (see Figure 2, Turkey Point Power Plant, National Parks, and Aquatic Preserve).

West of the facility are the South Florida Water Management District (SFWMD) L-31E Canal, the historic C-106 Canal (Model Lands North Canal), and the historic C-107 Canal (Model Lands South Canal). Southeast of the facility is the Card Sound Canal and southwest and south is the SFWMD S-20 Discharge Canal. The remnant canals at Turtle Point and the Barge Basin are located east northeast and northeast of the facility, respectively (see Figure 3, Turkey Point Power Plant Internal Outfall and Dam Structures and Adjacent Canals).

The facility consists of three electrical generating units: two nuclear units (Units 3 and 4) and one natural gas-fired combined cycle unit (Unit 5). Units 3, 4, and 5 began commercial operation in 1972, 1973, and 2007, respectively. Units 3 and 4 each have a nominal capacity of 815 Megawatts (MW) and Unit 5 has a nominal capacity of 1209 MW. Units 3, 4 and 5 are also regulated under the Florida Electrical Power Plant Siting Act (License No. PA03-045).

FPL owns and operates a recirculating cooling canal system (CCS) at the facility. The CCS provides a heat removal function for the cooling water from Units 3 and 4. Unit 5 dissipates heat through cooling tower cells. The heated water generated by operation of Units 3 and 4 is released to the recirculating CCS and returned to Units 3 and 4. The temperature of the water entering Units 3 and 4 is regulated by the U.S. Nuclear Regulatory Commission under the

Atomic Energy Act. Groundwater withdrawals from the Floridan aquifer is the source of cooling water for Unit 5, and is authorized under License No. PA03-045. Groundwater from the Floridan aquifer is also used as makeup water to help offset evaporation within the CCS.

The facility, as originally designed and constructed, included a once-through cooling water (OTCW) system (i.e., point source discharge of heated wastewater to surface waters). The facility obtained cooling water by drawing surface water from an intake channel connected to Biscayne Bay, and discharged the heated wastewater into Biscayne Bay and Card Sound through a series of discharge canals. FPL was required to construct the CCS to satisfy a 1971 consent judgment with the U.S. Department of Justice. The judgement required the permitting, construction, operation, and maintenance of the CCS as a recirculating cooling water system (i.e., no point source discharges of heated wastewater to surface waters). In addition, the judgement allowed FPL to directly discharge CCS water through the Card Sound Canal to Card Sound, provided the discharge met the stipulated requirements in the judgement. This allowance was to prevent the excessive concentration of salt in the CCS water.

In 1972, the U.S. Atomic Energy Commission prepared an environmental impact statement (EIS) with respect to the construction of the cooling canal system. The EIS indicated that water from the CCS would discharge to groundwater and that some of that groundwater could seep into adjacent surface waters (Biscayne Bay and Card Sound). The EIS acknowledged the potential for minimal adverse impacts on flora (red mangroves) and fauna (shallow benthic communities). The approach to groundwater seepage set forth in the draft permit is to monitor the effects of groundwater seepage and address any adverse environmental impacts that may develop.

The construction of the CCS was completed in August 1973. The CCS became fully operational in 1978 and occupies an area approximately 2 miles wide by 5 miles long. This area includes a network of 168 miles of earthen canals covering approximately 6,900 acres of which 4,370 acres are water surface. The circulation route from the plant discharge to plant intake is 13.2 miles and takes approximately 44 hours to complete. The CCS canals are excavated into the native rock and the underlying surficial aquifer, which is the Biscayne aquifer.

The CCS perimeter berms were constructed using structural road base material and excavated rock fill. Berm widths around the perimeter of the CCS range from about 25 feet to over 100 feet, with an average width of about 50 feet. Interior berms separating the canal sections are primarily covered with deposited excavated soils from the CCS canals.

The perimeter includes three small, manmade dams: two earthen dams each with an internal cement bentonite slurry wall (Hotel 2 north of Card Sound Canal and one located at Turtle Point); and a cellular cofferdam located near the plant in the Barge Basin.

In September 2016, the CCS periphery including dams, dikes, berms, and appurtenant structures were inspected by an independent qualified safety professional in accordance with the Department's Consent Order (CO) (OGC No. 16-0241) that was issued in June 2016. For more information on the CO, see Part II Section 3 of this Fact Sheet. The cofferdam was inspected both above and below the waterline. No structural defects or breaches were identified in the resulting report, dated September 2016, submitted by FPL to the Department. The report did, however, include recommendations for maintaining and protecting the long-term integrity of the CCS. In early 2018, FPL completed a number of the recommendations, including: (1) repair of the tie rods, walers, steel corrosion, and crest road on the barge canal cofferdam; (2) backfill of the old C-107 canal (now S-20 Discharge Canal) cut on the CCS side of bank; (3) stabilization of slopes (both sides) for the Hotel 2 dam; and (4) removal of trees greater than 4 inches in diameter from perimeter berm slopes.

In addition, the report included recommendations to inspect: (1) the CCS once every five years for the entire perimeter; and (2) the four small dams annually. Section VIII of the draft permit requires inspection of the CCS periphery, including the three dams, above and below the surface waterline for the entire perimeter by an independent qualified, State-registered professional engineer on a five-year basis and annually by a qualified, State-registered professional engineer. The term qualified means having successfully completed the Mine Safety and Health Administration Qualification for Impoundment Inspection course in addition to the Annual Retraining for Impoundment Qualification, or equivalent qualifications.

Furthermore, the draft permit requires FPL to submit to the Department an annual report of all impoundment inspections and maintenance activities, including corrective actions made in response to inspections, summarizing findings of all monitoring activities including the annual thermal efficiency evaluation of the CCS, remediation measures pertaining to the structural integrity, design, construction, and operation and maintenance of the CCS, and all other activities undertaken to repair or maintain the CCS.

The Department's CO requires the CCS to achieve a minimum 70 percent thermal efficiency and to control temperature and salinity. FPL has submitted a thermal efficiency plan to address water stage management, vegetation control, dredging, chemical additives to the CCS for facility operation, and upset recovery. FPL is implementing the efficiency plan and has been able to achieve greater than 70 percent thermal efficiency, and following permit issuance is required, under Section VIII of this draft permit, to monitor the thermal efficiency of the CCS in the months of April and August of each year.

Based on monitoring results, FPL identified in the Turtle Point Canal and Barge Basin locations where water originating from the CCS may reach tidal surface waters connected to Biscayne Bay. The CO requires FPL to conduct restoration projects in the above canal and basin area to prevent releases of groundwater from the CCS to surface waters connected to Biscayne Bay that result in exceedances of surface water quality standards in Biscayne Bay. The restoration projects are on schedule to be completed in accordance with the schedule prescribed in the CO.

The CCS is unlined, and therefore, discharges to the Biscayne aquifer beneath the CCS. The Biscayne aquifer has an approximate depth of 100 feet below land surface on the westside of the CCS and an approximate depth of 130 feet on the east side out in the Bay. Groundwater beneath the CCS is Class G-III, non-potable water with a total dissolved solids (TDS) content of 10,000 milligrams per liter (mg/L) or greater.

Class G-III groundwater is also present west (inland) of the CCS, at depth within the Biscayne aquifer. Present above this inland Class G-III groundwater is Class G-II groundwater, potable water that has a TDS content of less than 10,000 mg/L. Class G-II groundwater lies to the west, northwest, north of the CCS. For purposes of this permit the contact or intersection of Class G-II and Class G-III groundwater is called a "saltwater interface".

Saline water from the CCS has moved, at depth, westward of the L-31E Canal in excess of those amounts that would have occurred without the existence of the CCS. Elevated salinity levels in the CCS cause, or at a minimum contribute to, the hypersaline discharges into the groundwater. The CO requires FPL to cease discharges from the CCS that impair the reasonable and beneficial use of the adjacent Class G-II groundwaters to the west of the CCS. FPL is currently conducting remedial activities to address hypersaline waters that have extended beyond the facility's western boundaries for which the compliance point is identified as the L-31E Canal per the CO.

3. RETIREMENT OF UNITS 1 AND 2

Former Units 1 and 2 began operation in 1967 and 1968, respectively. These units were converted from generation mode to synchronous condenser mode to provide voltage support to the transmission system in 2017 and 2011, respectively. The converted units do not generate wastewater. However, stormwater run-off from the units is covered under this permit.

Process wastewater and stormwater associated with Units 1 and 2 were released to the CCS through an internal outfall designated as outfall I-002. Outfall I-002 piping from the basins to the CCS is scheduled for removal by January 1, 2019. Piping to the basins has already been capped. Therefore, internal outfall I-002 has been removed from the draft permit.

4. DESCRIPTION OF WASTEWATER

Stormwater and wastewater associated with power generation and ancillary activities are released to the CCS. Point source discharges, as defined in Rule 62-620.200(37), F.A.C., from the facility to surface waters of the State are not authorized under this draft permit.

Stormwater runoff associated with loading and unloading operations, outdoor storage, outdoor process activities, and ancillary maintenance activities is directed toward the CCS. The quantities of stormwater generated from these activities are dependent on many variables, including the length and intensity of the storm event. Stormwater may come into contact with petroleum, oil, and lubricants used in industrial equipment which may leak onto impervious areas and become entrained in stormwater runoff. Stormwater may also come into contact with petroleum products, heavy metals, salts, anti-freeze and other automotive fluids which may be present at the onsite closed-loop vehicle wash area and vehicle access areas. Maintenance that consists of earth disturbance activities may also be a significant source of sediment. This draft permit requires development and implementation of a Best Management Practices Plan (see Section II.2.c.).

Wastewater generated by Units 3 and 4 (see flow diagram in Figure 4) includes intermittent chemical volume control system including wet lay-up, feedwater condensate including wet lay-up, on-line chemical analyzer, steam generator blowdown, condensate polisher backwash, reverse osmosis reject, circulating water pumps seal water, alternate flow from the circulating water pump seal water tank, non-equipment area stormwater, maintenance/wash through equipment area/closed cooling water system maintenance, plant intake screen wash, and non-contact once-through cooling water (OTCW), which is denoted as condenser and intake cooling water (ICW) on the figure.

Wastewater generated by Unit 5 (see flow diagram Figure 5) includes cooling water, emergency generator backup cooling water, non-equipment area stormwater, equipment area stormwater and plant drains following oil/water separation, and wastewater sump discharge which includes heat recovery steam generator blowdown, wastewater treatment system blowdown, and cooling water treatment reject.

I. PURPOSE

This is a renewal of the existing individual industrial wastewater discharge permit No. FL0001562 for the Turkey Point Power Plant. The objective of this permit is to ensure the cooling canal system (CCS) water does not impair designated uses of adjacent surface waters and groundwater as defined in Chapters 62-302, and 62-520, F.A.C. Elements of the draft permit are as follows.

1. DISCHARGES AND MONITORING

a. Internal Outfall and CCS

Wastewater enters the CCS at Internal Outfall I-001 (see Figure 3), which is the only permitted outfall authorized by this permit. This permit retains previous monitoring requirements for Internal Outfall I-001. This permit also includes additional monitoring at Internal Outfall I-001 and locations within the CCS, as well as locations beyond the CCS, necessary to characterize wastewater for evaluation of CCS wastewater beyond the facility boundaries. The 1972 Environmental Impact Statement acknowledges that some seepage of water from the CCS may reach surface waters. To the extent that such seepage occurs, it shall not cause or contribute to a violation of the surface water quality standards in Chapter 62-302, F.A.C. (see Tables II.1 and II.2 and Figure 6, Turkey Point Power Plant Groundwater, Surface Water, and Porewater Monitoring Locations, Figure 7, Turkey Point Power Plant Surface Water Monitoring Locations, Figure 8, Coastal Mangrove Porewater Monitoring Locations, and Figure 9, Turkey Point Power Plant Groundwater Monitoring Locations).

Table II.1 Monitoring Locations Within the Cooling Canal System

OUI - Sampling location for internal outfall designated as I-001.
TPSWCCS - Turkey Point Surface Water Cooling Canal System.

Sample Station ID	Location	Latitude			Longitude		
		o	'	"	o	'	"
OUI-1	Cooling water discharge prior to entering the feeder canal to the CCS	25	26	00.60	80	20	15.64
TPSWCCS-1	Northwest corner of the CCS	25	25	56.0	80	21	00.8
TPSWCCS-2	Central portion of the CCS	25	23	39.0	80	21	06.7
TPSWCCS-3	Southwestern portion of the CCS	25	21	52.4	80	22	02.4
TPSWCCS-4	Southern portion of the CCS near the Hotel 2 Dam	25	21	25.3	80	20	23.1
TPSWCCS-5	East-central portion of the CCS	25	23	18.4	80	19	54.4
TPSWCCS-6	Northeastern portion of the CCS	25	25	56.2	80	19	40.2
TPSWCCS-7	West-central portion of the CCS	25	24	07.6	80	21	39.4

Table II.2 Parameters monitored in the Cooling Canal System

Parameter	**Units**	**Rationale**
Temperature, Water	Deg F	62-4.070, and 62-620.320, F.A.C. (BPJ)
Solids, Total Suspended	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Biochemical Oxygen Demand (BOD)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Dissolved Oxygen (DO), % Saturation	percent	62-4.070, and 62-620.320, F.A.C. (BPJ)
Oxygen Reduction Potential	mv	62-4.070, and 62-620.320, F.A.C. (BPJ)
pH	s.u.	62-4.070, and 62-620.320, F.A.C. (BPJ)
Color	PCU	62-4.070, and 62-620.320, F.A.C. (BPJ)
Solids, Total Dissolved	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Salinity	PSU	62-4.070, and 62-620.320, F.A.C. (BPJ)
Specific Conductance	umhos/cm	62-4.070, and 62-620.320, F.A.C. (BPJ)
Turbidity	NTU	62-4.070, and 62-620.320, F.A.C. (BPJ)
Nitrogen, Ammonia, Total (as N)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Ammonia, Total Unionized (as NH_3)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Ammonium ion (NH_4^+)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Nitrite plus Nitrate, Total (as N)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Nitrogen, Kjeldahl, Total (as N)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Nitrogen, Total	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Phosphate, Ortho (as PO_4)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Phosphorous, Total	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Chlorophyll *a*	ug/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Copper, Total Recoverable	ug/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Iron, Total Recoverable	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Zinc, Total Recoverable	ug/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Boron, Total Recoverable	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Chlorides (as Cl)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Magnesium, Total Recoverable	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Sodium, Total	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Sulfate, Total	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)

Parameter	Units	Rationale
Sulfide, Total	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Tritium	pCi/L	62-4.070, and 62-620.320, F.A.C. (BPJ)

b. Groundwater Monitoring (Groundwater Monitoring Group G-001)

Under this permit, CCS discharges to groundwater, both at and beyond the facility, will be monitored using a network of sixty-five monitoring wells (see Figure 9). The Biscayne aquifer will be monitored both laterally and vertically, with monitoring wells set in shallow, intermediate and deep zones. As shown in Figure 9, the network includes groundwater monitoring wells located in Biscayne Bay, the CCS, near the facility perimeter, and westward, or inland, of the facility.

During the period of operation authorized by this permit, FPL shall sample groundwater from the Biscayne aquifer from the following monitoring wells:

Table II.3 Groundwater Monitoring Well Locations

TPGW - Turkey Point Groundwater.
S - shallow, M - intermediate, and D - deep monitoring zones.
G-wells: Monitoring wells installed in 1972.
L-wells: Monitoring wells installed in 1974.

Monitoring Well ID	Description of Monitoring Location	Latitude			Longitude		
		o	'	"	o	'	"
TPGW-1S	West of Canal L-31E, west of northwest corner of the CCS (shallow)	25	26	4.7	80	21	15.8
TPGW-1M	West of Canal L-31E, west of northwest corner of the CCS (intermediate)	25	26	4.7	80	21	15.8
TPGW-1D	West of Canal L-31E, west of northwest corner of the CCS (deep)	25	26	4.7	80	21	15.8
TPGW-2S	West of the south-central portion of the CCS (shallow)	25	22	54.2	80	22	11.4
TPGW2M	West of the south-central portion of the CCS (intermediate)	25	22	54.2	80	22	11.4
TPGW-2D	West of the south-central portion of the CCS (deep)	25	22	54.2	80	22	11.4
TPGW-3S	South of the CCS (shallow)	25	20	42.1	80	20	51.9
TPGW-3M	South of the CCS (intermediate)	25	20	42.1	80	20	51.9
TPGW-3D	South of the CCS (deep)	25	20	42.1	80	20	51.9
TPGW-4S	Southwest Model Lands, at Tallahassee Road (shallow)	25	22	12.0	80	24	44.1
TPGW-4M	Southwest Model Lands, at Tallahassee Road (intermediate)	25	22	12.0	80	24	44.1
TPGW-4D	Southwest Model Lands, at Tallahassee Road (deep)	25	22	12.0	80	24	44.1
TPGW-5S	Northwest Model Lands – east of Tallahassee Road (shallow)	25	25	23.9	80	24	13.3
TPGW-5M	Northwest Model Lands – east of Tallahassee Road (intermediate)	25	25	23.9	80	24	13.3
TPGW-5D	Northwest Model Lands – east of Tallahassee Road (deep)	25	25	23.9	80	24	13.3
TPGW-6S	Northwest of the CCS, east of Homestead – Miami Speedway (shallow)	25	27	20.3	80	23	13.0
TPGW-6M	Northwest of the CCS, east of Homestead – Miami Speedway (intermediate)	25	27	20.3	80	23	13.0
TPGW-6D	Northwest of the CCS, east of Homestead – Miami Speedway (deep)	25	27	20.3	80	23	13.0
TPGW-7S	Northwest Model Lands (shallow)	25	26	02.5	80	25	40.7
TPGW-7M	Northwest Model Lands (intermediate)	25	26	02.5	80	25	40.7
TPGW-7D	Northwest Model Lands (deep)	25	26	02.5	80	25	40.7
TPGW-8S	West central Model Lands (shallow)	25	24	36.4	80	27	08.7
TPGW-8M	West central Model Lands (intermediate)	25	24	36.4	80	27	08.7
TPGW-8D	West central Model Lands (deep)	25	24	36.4	80	27	08.7
TPGW-9S	West of Card Sound Canal Road, southwest of CCS (shallow)	25	22	28.6	80	28	41.9
TPGW-9M	West of Card Sound Canal Road, southwest of CCS (intermediate)	25	22	28.6	80	28	41.9

Monitoring Well ID	Description of Monitoring Location	Latitude			Longitude		
		o	'	"	o	'	"
TPGW-9D	West of Card Sound Canal Road, southwest of CCS (deep)	25	22	28.6	80	28	41.9
TPGW-10S	Biscayne Bay, channel entrance to Barge Basin (shallow)	25	26	27.4	80	19	29.0
TPGW-10M	Biscayne Bay, channel entrance to Barge Basin (intermediate)	25	26	27.4	80	19	29.0
TPGW-10D	Biscayne Bay, channel entrance to Barge Basin (deep)	25	26	27.4	80	19	29.0
TPGW-11S	Biscayne Bay, east of the CCS (shallow)	25	23	49.4	80	18	15.0
TPGW-11M	Biscayne Bay, east of the CCS (intermediate)	25	23	49.4	80	18	15.0
TPGW-11D	Biscayne Bay, east of the CCS (deep)	25	23	49.4	80	18	15.0
TPGW-12S	North of the CCS (shallow)	25	26	55.4	80	20	22.9
TPGW-12M	North of the CCS (intermediate)	25	26	55.4	80	20	22.9
TPGW-12D	North of the CCS (deep)	25	26	55.4	80	20	22.9
TPGW-13S	In the central portion of the CCS (shallow)	25	23	39.0	80	21	07.1
TPGW-13M	In the central portion of the CCS (intermediate)	25	23	39.0	80	21	07.1
TPGW-13D	In the central portion of the CCS (deep)	25	23	39.0	80	21	07.1
TPGW-14S	Biscayne Bay, southeast of the CCS (shallow)	25	21	15.5	80	19	34.5
TPGW-14M	Biscayne Bay, southeast of the CCS (intermediate)	25	21	15.5	80	19	34.5
TPGW-14D	Biscayne Bay, southeast of the CCS (deep)	25	21	15.5	80	19	34.5
TPGW-15S	Northwest corner of CCS (shallow)	25	25	56.9	80	21	2.5
TPGW-15M	Northwest corner of CCS (intermediate)	25	25	56.9	80	21	2.5
TPGW-15D	Northwest corner of CCS (deep)	25	25	56.9	80	21	2.5
TPGW-16S	East of the south-central portion of the CCS (shallow)	25	22	37.7	80	19	53.8
TPGW-16M	East of the south-central portion of the CCS (intermediate)	25	22	37.7	80	19	53.8
TPGW-16D	East of the south-central portion of the CCS (deep)	25	22	37.7	80	19	53.8
TPGW-17S	East of the L-31E canal, adjacent to S-20 structure (shallow)	25	22	71.4	80	22	53.2
TPGW-17M	East of the L-31E canal, adjacent to S-20 structure (intermediate)	25	22	1.4	80	22	32.2
TPGW-17D	East of the L-31E canal, adjacent to S-20 structure (deep)	25	22	1.4	80	22	32.2
TPGW-18S	Model Lands, west of L-3 (shallow)	25	25	12.5	80	22	17.8
TPGW-18M	Model Lands, west of L-3 (intermediate)	25	25	12.5	80	22	17.8
TPGW-18D	Model Lands, west of L-3 (deep)	25	25	12.5	80	22	17.8
TPGW-19S	Model Lands, north of Florida City Canal (shallow)	25	26	54.2	80	21	31.3
TPGW-19M	Model Lands, north of Florida City Canal (intermediate)	25	26	54.2	80	21	31.3
TPGW-19D	Model Lands, north of Florida City Canal (deep)	25	26	54.2	80	21	31.3
TPGW-20D	Adjacent to City of Homestead baseball complex	25	27	19.9	80	26	10.5
TPGW-21S	Converted USGS well G-3164 (shallow)	25	25	20.2	80	26	10
TPGW-21M	Converted USGS well G-3164 (intermediate)	25	25	20.2	80	26	10
TPGW-21D	Converted USGS well G-3164 (deep)	25	25	20.2	80	19	10
L-3	East of the L-31E canal, north-central portion of the CCS (Not Automated). This well is an open-hole well, monitored at approximately 18 feet and 58 feet below land surface.	25	25	09.7	80	21	28.7
L-5	East of the L-31E canal, south-central portion of the CCS (Not Automated). This well is an open-hole well, monitored at approximately 18 feet and 58 feet below land surface.	25	23	20.9	80	22	7.3
G-28	Tallahassee Rd, south of Model Lands basin (Not Automated). This well is an open-hole well, monitored at approximately 18 feet and 58 feet below land surface.	25	23	25.5	80	24	43.6
G-21	Tallahassee Rd, north of Model Lands basin (Not Automated). This well is an open-hole well, monitored at approximately 18 feet and 58 feet below land surface.	25	25	34.8	80	24	42.9

Under the FPL Turkey Point Power Plant Groundwater, Surface Water, and Ecological Monitoring Plan, which began in 2009, FPL conducted an assessment regarding the identification of potential tracer monitoring parameters for use in determining the occurrence of CCS waters in the region. FPL documented their findings in the August 2011 annual monitoring report submitted to SFWMD and the Department. Based on these findings, the Department identified tritium in conjunction with major seawater ions and other constituents to be monitored as a means of

fingerprinting to be used by FPL in identifying CCS waters in the region. The wells in Table II.3 above shall be monitored for the following parameters.

Table II.4 Parameters monitored in Groundwater

Parameter	Units	Rationale
Temperature	Deg F	62-520, F.A.C.
Water Level Relative to NAVD	ft	62-520, F.A.C.
Specific Conductance	umhos/cm	62-520, F.A.C.
Salinity	PSU	62-520, F.A.C.
Fluid Density	g/cm^3	62-520, F.A.C.
pH	s.u.	62-520, F.A.C.
Solids, Total Dissolved (TDS)	mg/L	62-520, F.A.C.
Chloride (as Cl)	mg/L	62-520, F.A.C.
Sodium, Total	mg/L	62-520, F.A.C.
Calcium, Total	mg/L	62-520, F.A.C.
Potassium, Total	mg/L	62-520, F.A.C.
Iron, Total Recoverable	mg/L	62-520, F.A.C.
Tritium	pCi/L	Tracer (BPJ)
Nitrogen, Ammonia, Total (as N)	mg/L	62-520, F.A.C.
Ammonium ion (NH_4^+)	mg/L	62-520, F.A.C.
Ammonia, Total Unionized (as NH_3)	mg/L	62-520, F.A.C.
Nitrite plus Nitrate, Total (as N)	mg/L	62-520, F.A.C.
Nitrogen, Kjeldahl, Total (as N)	mg/L	62-520, F.A.C.
Nitrogen, Total	mg/L	62-520, F.A.C.
Phosphorus, Total (as P)	mg/L	62-520, F.A.C.
Phosphate, Ortho (as PO_4)	mg/L	62-520, F.A.C.
Boron, Total Recoverable	mg/L	62-520, F.A.C.
Magnesium, Total Recoverable	mg/L	62-520, F.A.C.
Sulfate, Total	mg/L	62-520, F.A.C.

The above listed parameters are report only except for Nitrite plus Nitrate, Total (as N), which has a limit of 10 mg/L in samples collected from monitoring wells TPGW-1, and TPGW-18.

Tritium will be collected quarterly and is being monitored as a tracer for identifying contributions of CCS water to the Biscayne aquifer.

In addition, permit condition II.D.8 prohibits the discharge of nuisance, acutely toxic, carcinogenic, mutagenic, teratogenic, and dangerous components in accordance with Rules 62-520.400, and 62-520.430, F.A.C.

c. Surface Water Monitoring (Biscayne Bay, L-31E Canal, S-20 Discharge Canal, Card Sound Canal) (Surface Water Monitoring Group D-01A)

Surface water monitoring as shown in Table II.5 is required in this permit to confirm that discharge from the CCS to groundwater does not impair the designated use of contiguous surface waters pursuant to Rule 62-520.310(2), F.A.C. Therefore, the same parameters are monitored in the CCS and surface waters of the State as discussed below.

Biscayne Bay is subject to the estuary-specific numeric nutrient criteria in Paragraph 62-302.532(1)(h), F.A.C. The Department updated the 303d lists of impaired waters in June 2017, identifying the majority of Biscayne Bay, including the South Central Biscayne Bay segments east of the facility as impaired for nutrients based on chlorophyll *a* levels. Section 403.067, F.S., implements section 303(d) of the Clean Water Act, and requires the Department to develop lists of impaired waters, and to develop Total Maximum Daily Loads (TMDL) for those waters. The Card Sound segment of Biscayne Bay to the south of the facility is not identified as impaired for nutrients. Biscayne Bay is

not identified as impaired for any other parameters and has not been previously identified as impaired for nutrients. Figure 10 provides a map of Biscayne Bay showing South Central and Card Sound bay segments.

In accordance with Paragraphs 62-302.700(9)(h)5, F.A.C., (Biscayne Bay, Cape Florida) and 62-302.700(9)(h)6, F.A.C., (Biscayne Bay, Card Sound) Biscayne Bay is an Outstanding Florida Water (OFW), and parts of the South Central and Card Sound bay segments are within the Biscayne Bay Aquatic Preserve. "Outstanding Florida Waters" means waters designated by the Environmental Regulation Commission as worthy of special protection because of their natural attributes as defined by Rule 62-302.200(26), F.A.C. Additionally, in accordance with Paragraph 62-302.700(9)(a)1, F.A.C., Biscayne National Park is an OFW and encompasses much of the Biscayne Bay estuary. Biscayne National Park is also an Outstanding National Resource Water in accordance with Paragraph 62-302.700(10)(a)1, F.A.C. "Outstanding National Resources Waters" means waters designated by the Environmental Regulation Commission that are of such exceptional recreational or ecological significance that water quality should be maintained and protected as defined by Rule 62-302.200(27), F.A.C.

The L-31E canal is approximately parallel to the western boundary of the CCS, and the S-20 Discharge Canal is parallel to the southwest and south sides of the CCS. These canals are controlled by the SFWMD. Salinity in the canals fluctuates seasonally.

The L-31E canal was primarily constructed as a barrier to prevent salinity intrusion to locations west of the canal. The L-31E canal collects water from other drainage canals in the area. The L-31E canal discharges into Biscayne Bay through the S-20 Discharge Canal.

Table II.5 Surface Water Monitoring Locations

TPBBSW - Turkey Point Biscayne Bay Surface Water.
TPSWC - Adjacent Surface Water Canals.
T - Top samples, B - Bottom samples.

Sample Station ID	Location	Latitude			Longitude		
		o	'	"	o	'	"
TPBBSW-3	Biscayne Bay	25	23	49.38	80	18	14.82
TPBBSW-4	Biscayne Bay	25	20	40.34	80	19	43.90
TPBBSW-5	Biscayne Bay	25	19	13.69	80	22	1.70
TPBBSW-7T	Biscayne Bay near Turtle Point Canal Dam	25	25	9.99	80	19	42.15
TPBBSW-8	Terminus of Barge Canal	25	25	12.61	80	19	29.89
TPBBSW-10	Biscayne Bay	25	26	27.83	80	19	22.92
TPBBSW-14	Biscayne Bay	25	25	15.50	80	19	34.50
TPSWC-1B TPSWC-1T	L-31E Canal	25	25	58.44	80	21	11.87
TPSWC-2B TPSWC-2T	L-31E Canal	25	24	21.20	80	21	46.30
TPSWC-3B TPSWC-3T	L-31E Canal	25	22	10.47	80	22	33.00
TPSWC-4B TPSWC-4T	S-20 Canal	25	21	24.10	80	22	3.00
TPSWC-5B TPSWC-5T	Card Sound Canal at Hotel 2 Dam	25	21	24.62	80	20	18.70

Table II.6 Parameters monitored in Surface Waters

Parameter	Units	Rationale

Parameter	Units	Rationale
Temperature, Water	Deg F	62-4.070, and 62-620.320, F.A.C. (BPJ)
pH	s.u.	62-4.070, and 62-620.320, F.A.C. (BPJ)
Solids, Total Dissolved (TDS)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Salinity	PSU	62-4.070, and 62-620.320, F.A.C. (BPJ)
Specific Conductance	umhos/ cm	62-4.070, and 62-620.320, F.A.C. (BPJ)
Turbidity	NTU	62-4.070, and 62-620.320, F.A.C. (BPJ)
Nitrogen, Ammonia, Total (as N)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Ammonia, Total Unionized (as NH_3)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Ammonium ion (NH_4^+)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Nitrite plus Nitrate, Total (as N)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Nitrogen, Kjeldahl, Total (as N)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Nitrogen, Total	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Phosphate, Ortho (as PO_4)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Phosphorous, Total	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Chlorophyll *a*	ug/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Copper, Total Recoverable	ug/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Iron, Total Recoverable	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Zinc, Total Recoverable	ug/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Boron, Total Recoverable	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Chlorides (as Cl)	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Magnesium, Total Recoverable	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Sodium, Total	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Sulfate, Total	mg/L	62-4.070, and 62-620.320, F.A.C. (BPJ)
Tritium	pCi/L	62-4.070, and 62-620.320, F.A.C. (BPJ)

d. Porewater Monitoring

Table II.7 Porewater Monitoring Locations (Surface Water Monitoring Group D-02A)

During the period of operation authorized by this permit, the permittee shall sample porewater (free water present in sediments) from coastal marine wetlands north, east, and south of the CCS from locations described below in accordance with the protocols set forth in FPL's Quality Assurance Project Plan dated 2013:

Porewater Monitoring ID	Description of Monitoring Location	Latitude			Longitude		
PW M1-2	Coastal marine wetlands; ½ mile north of power block	25	26	49.8	80	19	57.7
PW M2-2	Coastal marine wetlands; east of CCS, 2 miles south of power block	25	24	18.8	80	19	47.6
PW M3-2	Coastal marine wetlands; east of CCS, 3.4 miles south of power block	25	23	4.2	80	19	40.6

PW M4-2	Coastal marine wetlands; southeast corner of CCS	25	21	16.8	80	19	44.9
PW M5-2	Coastal marine wetlands; south of CCS	25	20	56	80	20	33
PW M6-1	Coastal marine wetlands; west of Card Sound Road (background location)	25	17	40.1	80	23	46.8

Table II.8 Parameters monitored in Porewater

Parameter	Units	Sample Type	Monitoring Frequency
Temperature	Deg F	Grab	Semi-Annually
pH	s.u.	Grab	Semi-Annually
Specific Conductance	µmhos/cm	Grab	Semi-Annually
Salinity	PSU	Grab	Semi-Annually
Fluid Density	g/cm^3	Grab	Semi-Annually
Solids, Total Dissolved (TDS)	mg/L	Grab	Semi-Annually
Chloride (as Cl)	mg/L	Grab	Semi-Annually
Sodium, Total	mg/L	Grab	Semi-Annually
Calcium, Total	mg/L	Grab	Semi-Annually
Potassium, Total	mg/L	Grab	Semi-Annually
Boron, Total Recoverable	mg/L	Grab	Semi-Annually
Copper, Total Recoverable	ug/L	Grab	Semi-Annually

Iron, Total Recoverable	mg/L	Grab	Semi-Annually
Zinc, Total Recoverable	ug/L	Grab	Semi-Annually
Magnesium, Total Recoverable	mg/L	Grab	Semi-Annually
Sulfate, Total	mg/L	Grab	Semi-Annually
Tritium	pCi/L	Grab	Semi-Annually
Nitrogen, Ammonia, Total (as N)	mg/L	Grab	Semi-Annually
Ammonium ion (as NH_4)	mg/L	Grab	Semi-Annually
Ammonia, Total Unionized (as NH_3)	mg/L	Grab	Semi-Annually
Nitrite plus Nitrate, Total (as N)	mg/L	Grab	Semi-Annually
Nitrogen, Kjeldahl, Total (as N)	mg/L	Grab	Semi-Annually
Nitrogen, Total (as N)	mg/L	Grab	Semi-Annually
Phosphorus, Total (as P)	mg/L	Grab	Semi-Annually
Phosphate, Ortho (as PO_4)	mg/L	Grab	Semi-Annually

2. NEW PERMIT CONDITIONS

a. Nutrient Monitoring and Annual Reporting

The draft permit requires FPL to submit an annual nutrient monitoring summary report based on at least 24 months of groundwater, surface water, and CCS monitoring data to the Department. The report is to be submitted by November of each year, commencing in the third year following permit issuance. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.), Florida Statute, applicable portions of the report must be signed and sealed by the professional(s) who prepared them. The report is required to include by station and depth where specified:

a. Annual geometric mean (AGM) concentrations by nutrient parameter;
b. Arithmetic mean;
c. Percentiles including 25^{th}, 75^{th}, and 90^{th}, number of samples collected by parameter; and

d. Evaluation of trends over the period of record by parameter.

b. Impoundment Conditions

FPL is required to properly operate and maintain all treatment and control facilities used to achieve compliance with this permit. Impoundments, including the CCS, used to treat or store wastewater are considered to be treatment and control facilities and are subject to the operation and maintenance requirements in this permit.

The permit includes new requirements to address impoundment construction, operation, and maintenance, including periodic inspections by trained personnel who are knowledgeable in impoundment design and safety. In addition, annual inspections by qualified responsible officials are required. Increased monitoring is required after large precipitation events, when there is an increased stress to impoundments and a greater potential for impacts on integrity. In response to any changes, such as cracks, erosion, bulges, and changes in seepage that may compromise their integrity, FPL is also required to respond in a timely manner. The permit requires documenting the results of the annual inspections and reporting the remedial activities taken, as well as timely reporting of changes to integrity and associated corrective actions.

The permittee shall take actions that will allow the thermal efficiency of the CCS to achieve a minimum annual average of 70 percent. The CCS shall be monitored at an annual average of its thermal efficiency determined, as is prescribed in the Turkey Point Thermal Efficiency Plan. The findings of each inspection including thermal efficiency shall be documented in a written annual inspection report as described in permit condition VIII.G.1.

c. Best Management Practices Plan

FPL is required to develop and implement a Best Management Practices Plan (Plan) to prevent or minimize the generation and the potential for the release of pollutants (including mercury per Rule 62-304.900, F.A.C., copper, iron, zinc, and nutrients) from facility operations (including spillage, leaks, and material and waste handling and storage activities) to industrial wastewater and stormwater in the CCS. FPL must develop and implement provisions of the Plan in accordance with Section VII of the permit.

e. Monitoring

The draft permit requires FPL to monitor groundwater, surface water, and porewater (see Figure 6). Groundwater monitoring consists of an existing network of sixty-five monitoring wells (see Figure 9). The Biscayne aquifer will be monitored both laterally and vertically, with monitoring wells set in shallow, intermediate and deep zones. As shown in Figure 9, the network includes groundwater monitoring wells located in Biscayne Bay, the CCS, near the facility perimeter, and westward, or inland, of the facility.

The surface watering monitoring consists of 20 monitoring sites – six in canals adjacent to the CCS, seven within the CCS, and seven in Biscayne Bay (see Figure 7). The previous permit included one of the monitoring sites in the CCS. The other nineteen monitoring sites are existing from other monitoring programs, and were selected to be included in this draft permit. Parameters include temperature, total suspended solids, pH, salinity, specific conductance, copper, iron and zinc.

Porewater monitoring consists of six sites located in coastal mangroves (see Figure 8). One site is located to establish background conditions. The other five are located to establish water quality conditions north, east and south of the CCS. The six porewater sites are existing from other monitoring programs, and were selected to be included in this draft permit. Parameters monitored at the porewater and surface water sites are the same. The draft permit requires FPL to take action to lower copper, iron, zinc and nitrate and nitrite in the CCS water if the levels reach certain thresholds.

3. CONSENT ORDER (OGC File No. 16-0241)

On June 20, 2016, FPL entered into a Consent Order (CO) with the Department to resolve a Notice of Violation (NOV) dated April 25, 2016. The CO finds that elevated salinity levels in the CCS cause, or at a minimum contribute to, hypersaline discharges into the groundwater. The CCS is the major continuing cause of the westward movement of the saltwater interface (the intersection of Class G-II and G-III groundwaters), and that the discharge of hypersaline water contributes to saltwater intrusion. (The phrase "hypersaline" as used in the CO means water that exceeds 19,000 mg/L of chlorides). Saltwater intrusion into the area west of the CCS is impairing the reasonable and beneficial use of adjacent II groundwater in that area. The CO stipulates remedial actions and timelines for achieving compliance with the following objectives:

a. cease discharges from the CCS that impair the reasonable and beneficial use of the adjacent Class G-II ground waters to the west of the CCS in violation of Condition I.1 (formerly Condition IV.1) of the Permit and Rule 62-520.400, F.A.C.;

b. prevent releases of groundwater from the CCS to surface waters connected to Biscayne Bay that result in exceedances of surface water quality standards; and

c. provide mitigation for impacts related to the historic operation of the CCS, including but not limited to the hypersaline plume and its influence on the saltwater interface.

After FPL has demonstrated to the Department that it has fulfilled the requirements of the CO, all requirements of the CO will be terminated except for the requirement to maintain the average annual salinity of the CCS at or below 34 practical salinity until an average annual salinity of the CCS is designated in a Department permit.

4. THE ADMINISTRATIVE RECORD

The administrative record including application, draft permit, fact sheet, public notice (after release), comments received and additional information is available for public inspection during normal business hours at the location specified in Section 8. Copies will be provided at a minimal charge per page.

5. PROPOSED SCHEDULE FOR PERMIT ISSUANCE

Draft Permit and Public Notice to Applicant and U.S. Environmental Protection Agency (EPA)	January 2, 2019
Public Comment Period	Beginning: February 1, 2019 Ending: March 3, 2019
Notice of Intent to Issue	April 2, 2019
Notice of Permit Issuance	April 23, 2019

6. DEPARTMENTOF ENVIRONMENTAL PROTECTION CONTACT

Additional information concerning the permit and proposed schedule for permit issuance may be obtained during normal business hours from:

Marc Harris, P.E.
Department of Environmental Protection
Bob Martinez Center
2600 Blair Stone Road, Mail Station 3545
Tallahassee, Florida 32399-2400
Telephone Number: (850) 245-8589

Fax Number: (850) 245-8669

7. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

a. Public Comment Period

The Department of Environmental Protection proposes to issue a wastewater facility permit to this applicant subject to the aforementioned effluent limitations and conditions. This decision is tentative and open to comment from the public.

Interested persons are invited to submit written comments regarding permit issuance on the draft permit limitations and conditions to the following address:

Department of Environmental Protection
2600 Blair Stone Road
Mail Station 3545
Tallahassee, Florida 32399-2400
Attn.: Marc Harris, P.E.

All comments received within 30 days following the date of public notice, pursuant to Rule 62-620.550, F.A.C., will be considered in the formulation of the final decision with regard to permit issuance.

Any interested person may submit written comments on the Department's proposed permitting decision or may submit a written request for a public meeting to the address specified above, in accordance with Rule 62-620.555, F.A.C. The comments or request for a public meeting must contain the information set forth below and must be received in the above address of the Department within 30 days of receipt or publication of the public notice. Failure to submit comments or request a public meeting within this time period will constitute a waiver of any right such person may have to submit comments or request a public meeting under Rule 62-620.555, F.A.C.

The comments or request for a public meeting shall contain the following information:
(1) The commenter's name, address and telephone number, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(2) A statement of how and when notice of the draft permit was received;
(3) A description of any changes the commenter proposes for the draft permit;
(4) A full explanation of the factual and legal reasons for each proposed change to the draft permit; and
(5) A request that a public meeting be scheduled (if applicable) including a statement of the nature of the issues proposed to be raised at the meeting.

b. Public Meeting

The Department will hold a public meeting if there is a significant degree of public interest in the draft permit or if it determines that useful information and data may be obtained thereby. Public notice of such a meeting shall be published by the applicant at least 30 days prior to the meeting.

If a public meeting is scheduled the public comment period is extended until the close of the public meeting. If a public meeting is held any person may submit oral or written statements and data at the meeting on the Department's proposed action.

c. Issuance of the Permit

The Department will make its decision regarding permit issuance after consideration of all written comments, including comments from the EPA on surface water discharge (NPDES) aspects of the draft or proposed permit; the requirements of Chapter 403, F.S., and appropriate rules; and, if a public meeting is held, after consideration of all comments, statements and data presented at the public meeting. The Department will respond to all significant comments in writing. The Department's response to significant comments will be included in the administrative record of the permit and will be available for public inspection at the above address of the Department.

Unless a request for an administrative hearing, or an extension of time to file a petition for an administrative hearing, pursuant to Chapter 120, F.S., as indicated in d. below, is granted, the Department will take final agency action by issuing the permit or denying the permit application. If an administrative hearing is convened, final agency action will be based on the outcome of the hearing.

d. Administrative Hearing

A person whose substantial interests are affected by the Department's proposed permitting decision has the opportunity to petition for an administrative proceeding (hearing) to challenge the Department's decision in accordance with Section 120.57, F.S.

An administrative hearing is an evidentiary proceeding in which evidence is presented by testimony and exhibits before an independent hearing officer. The result of an administrative hearing is the issuance of the hearing officer's recommended order to the Department, including the hearing officer's findings of fact, based on the evidence presented at the hearing. The Department will issue a final order, granting or denying the permit, based on the hearing officer's recommended order.

The petition for an administrative hearing 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, Tallahassee, Florida 32399-3000, within 14 days of publication of notice of agency action or within 14 days of personal receipt of notice of agency action, whichever occurs first. The petitioner is to mail a copy of the petition to the applicant at the time of filing. Failure to file a petition within this time period will constitute a waiver of any right such person may have to request an administrative determination (hearing) under section 120.57, F.S. The petition is to contain the following information:

(1) The name, address and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(2) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(3) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(4) A statement of the material facts which the petitioner contends warrant reversal or modification of the Department's action or proposed action;
(5) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
(6) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wants the Department to take with respect to the Department's action or proposed action.

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 the notice of agency action. Persons whose substantial interests will be affected by any decision of the Department on the application have the right to petition to become a party to the proceeding, regardless of their agreement or disagreement with the Department's proposed action indicated in the notice of agency action.

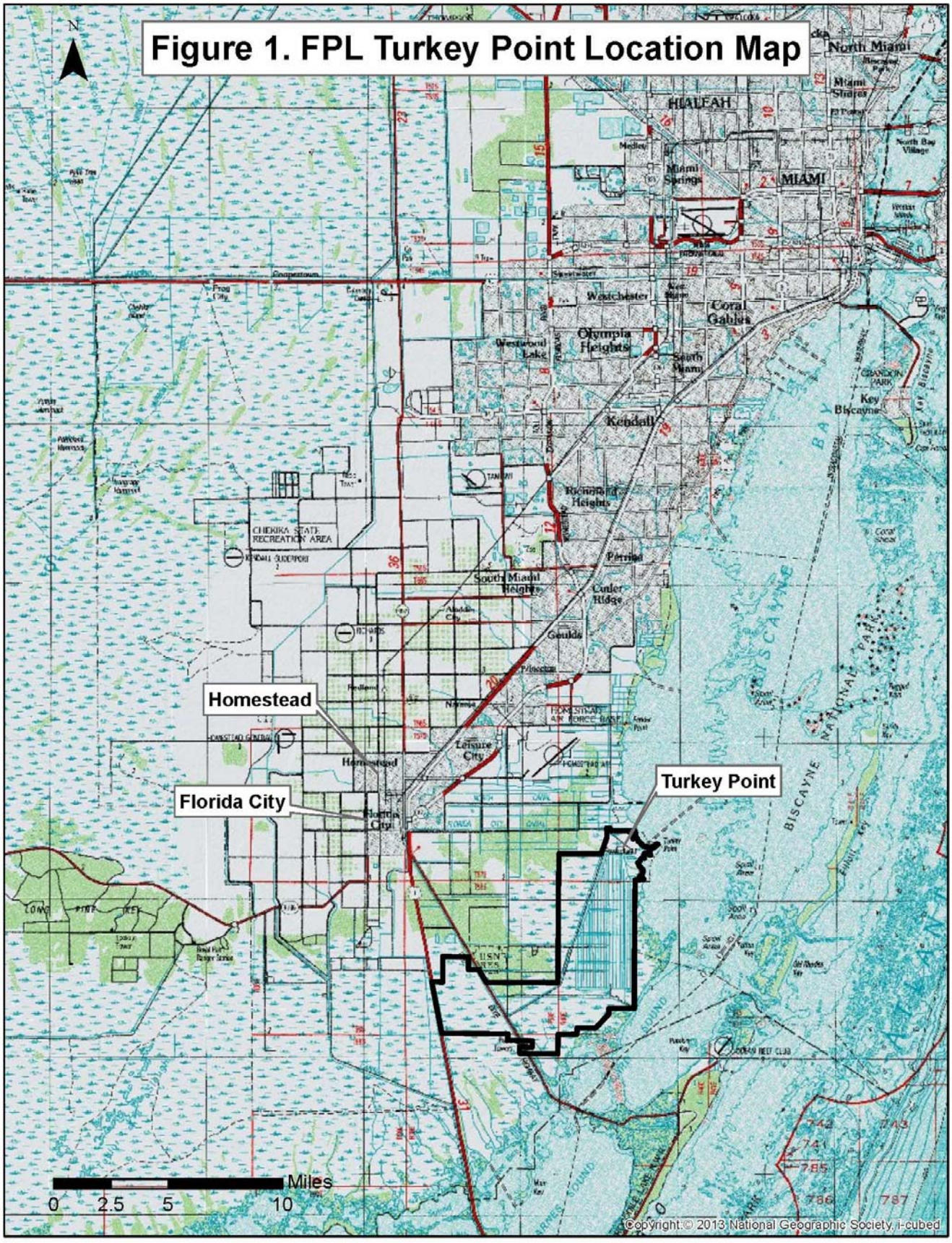
Figure 1. FPL Turkey Point Location Map
N
North Miami
HIALEAH
Miami Shores
North Bay Village
Miami Springs
MIAMI
Westchester
Coral Gables
Olympia Heights
Westwood Lake
South Miami
Key Biscayne
Kendall
Richmond Heights
CHEKIKA STATE RECREATION AREA
Perrine
South Miami Heights
Cutler Ridge
Goulds
Homestead
Leisure City
Florida City
Turkey Point
BISCAYNE BAY
BISCAYNE NATIONAL PARK
Miles
0 2.5 5 10
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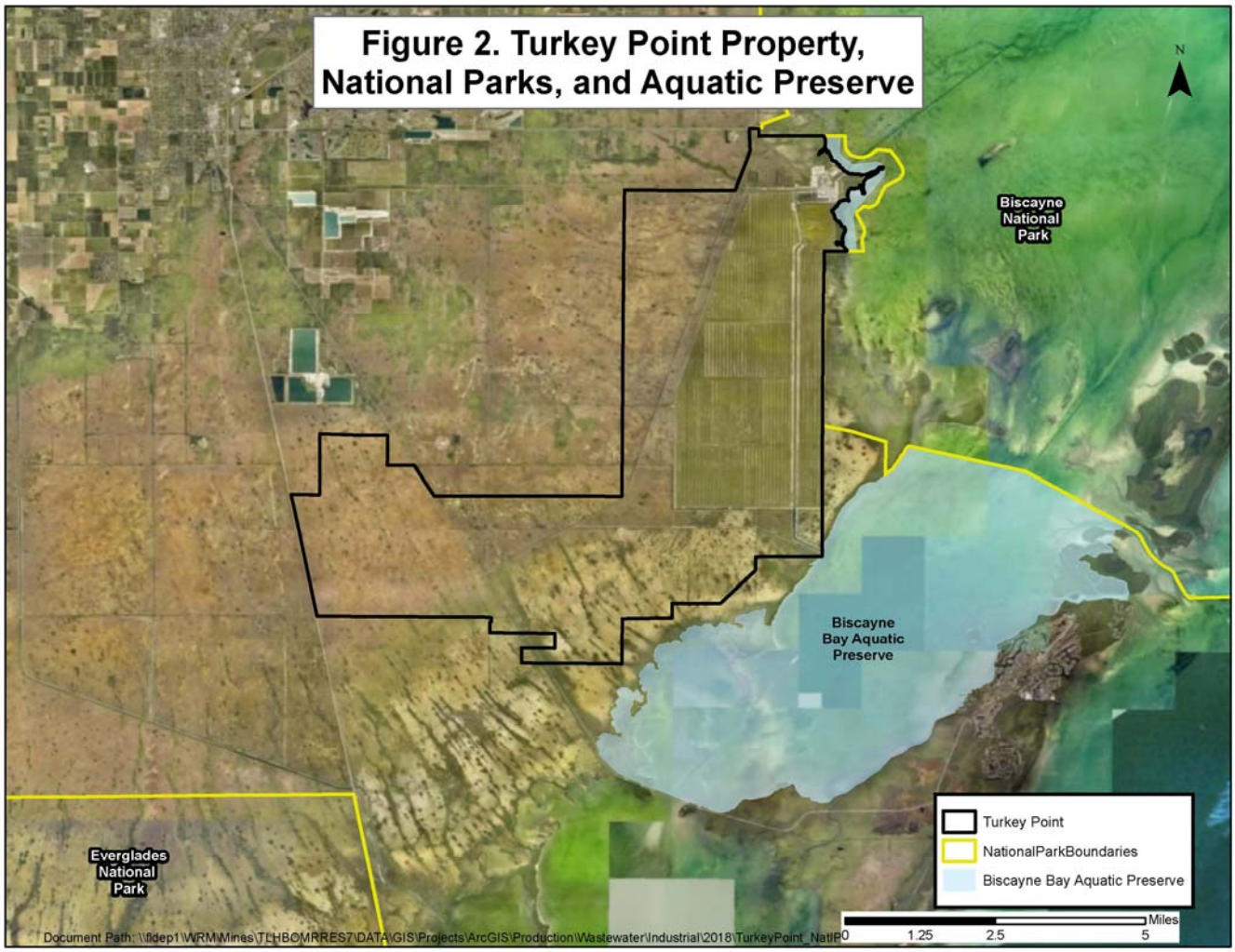
Figure 2. Turkey Point Property, National Parks, and Aquatic Preserve
N
Biscayne National Park
Biscayne Bay Aquatic Preserve
Everglades National Park
Turkey Point
NationalParkBoundaries
Biscayne Bay Aquatic Preserve
Miles
0
1.25
2.5
5
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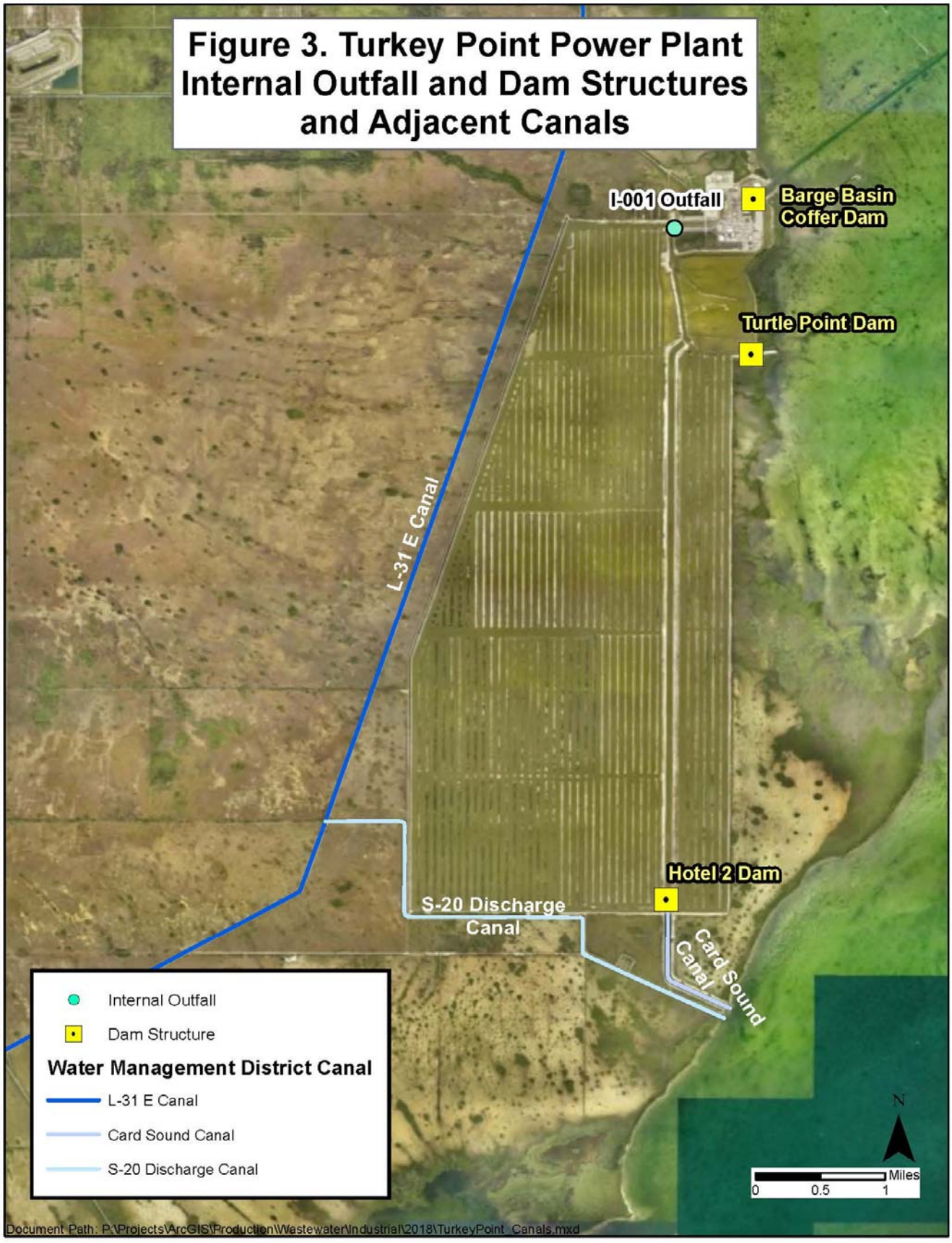
Figure 3. Turkey Point Power Plant Internal Outfall and Dam Structures and Adjacent Canals
I-001 Outfall
Barge Basin Coffer Dam
Turtle Point Dam
L-31 E Canal
Hotel 2 Dam
S-20 Discharge Canal
Card Sound Canal
Internal Outfall
Dam Structure
Water Management District Canal
L-31 E Canal
Card Sound Canal
S-20 Discharge Canal
N
Miles
0
0.5
1
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Figure 4. FPL Turkey Point Power Plant Units 3 & 4 Flow Diagram

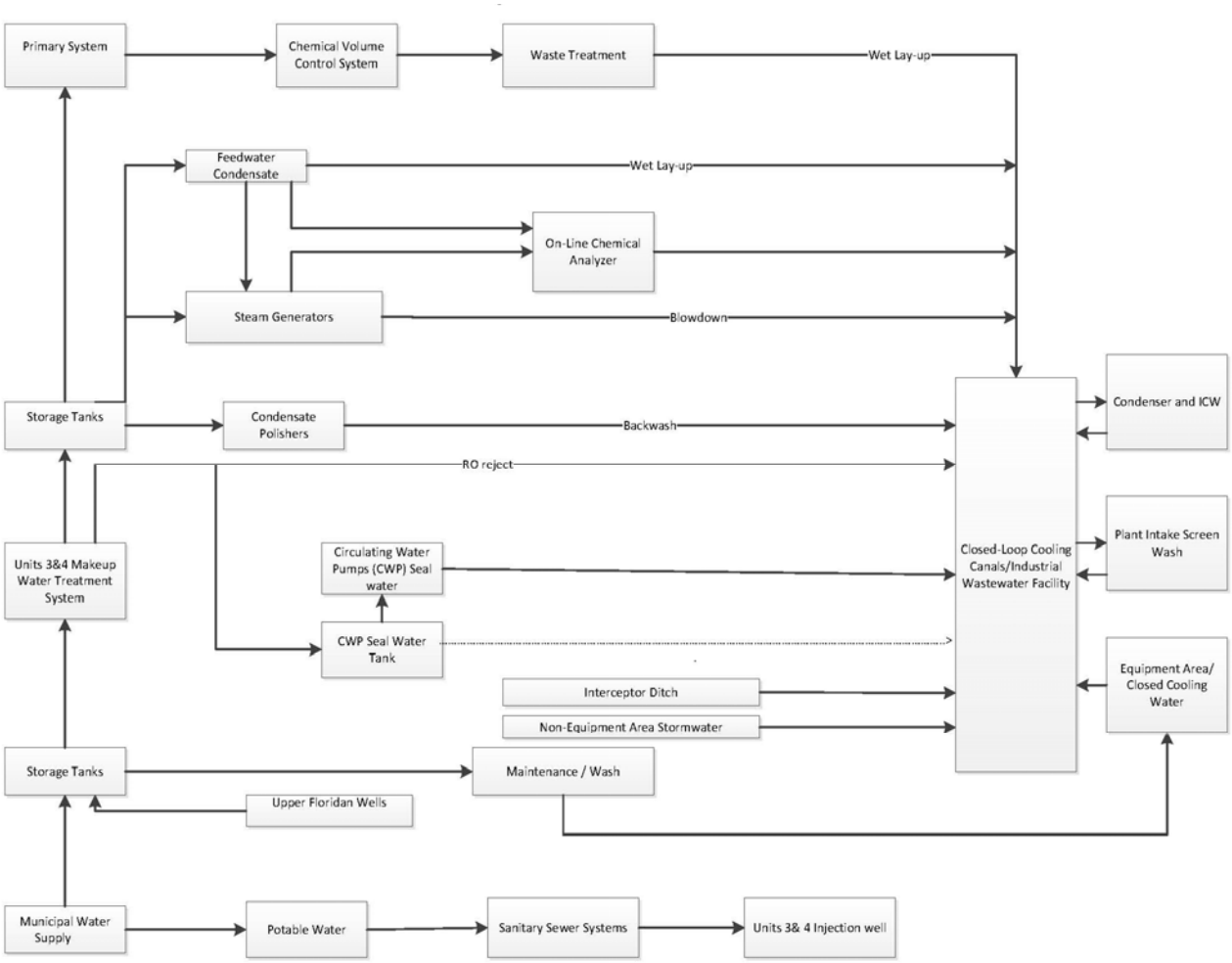

Figure 5. FPL Turkey Point Power Plant Unit 5 Flow Diagram

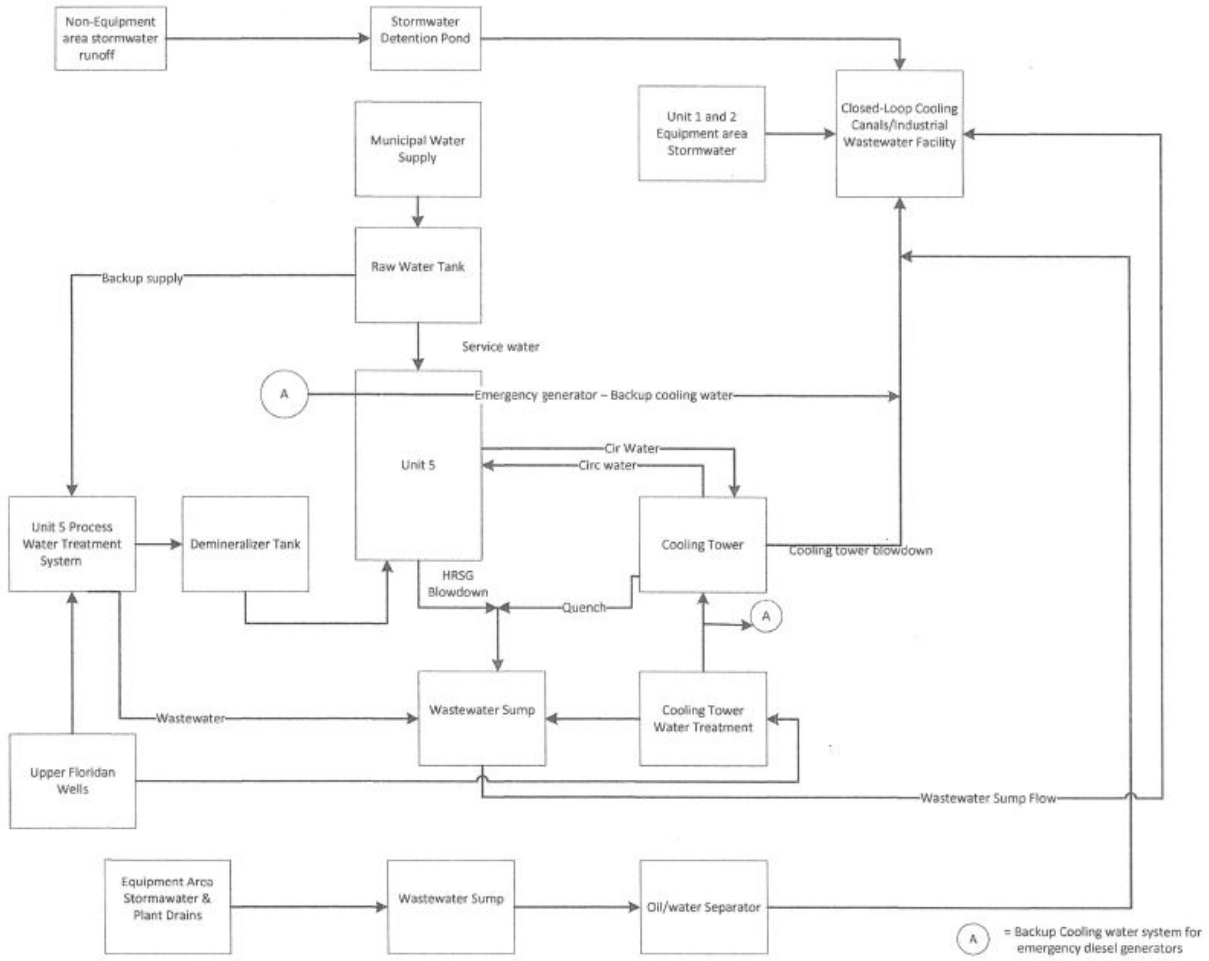


Figure 6. Turkey Point Power Plant Groundwater, Surface Water, and Porewater Monitoring Locations
N
Biscayne Bay Surface Water Location
Canal Surface Water Location
Cooling Canal System Surface Water Location
Historical Groundwater Monitoring Location
Groundwater Monitoring Location
Coastal Mangrove Transects
Miles
0
1
2

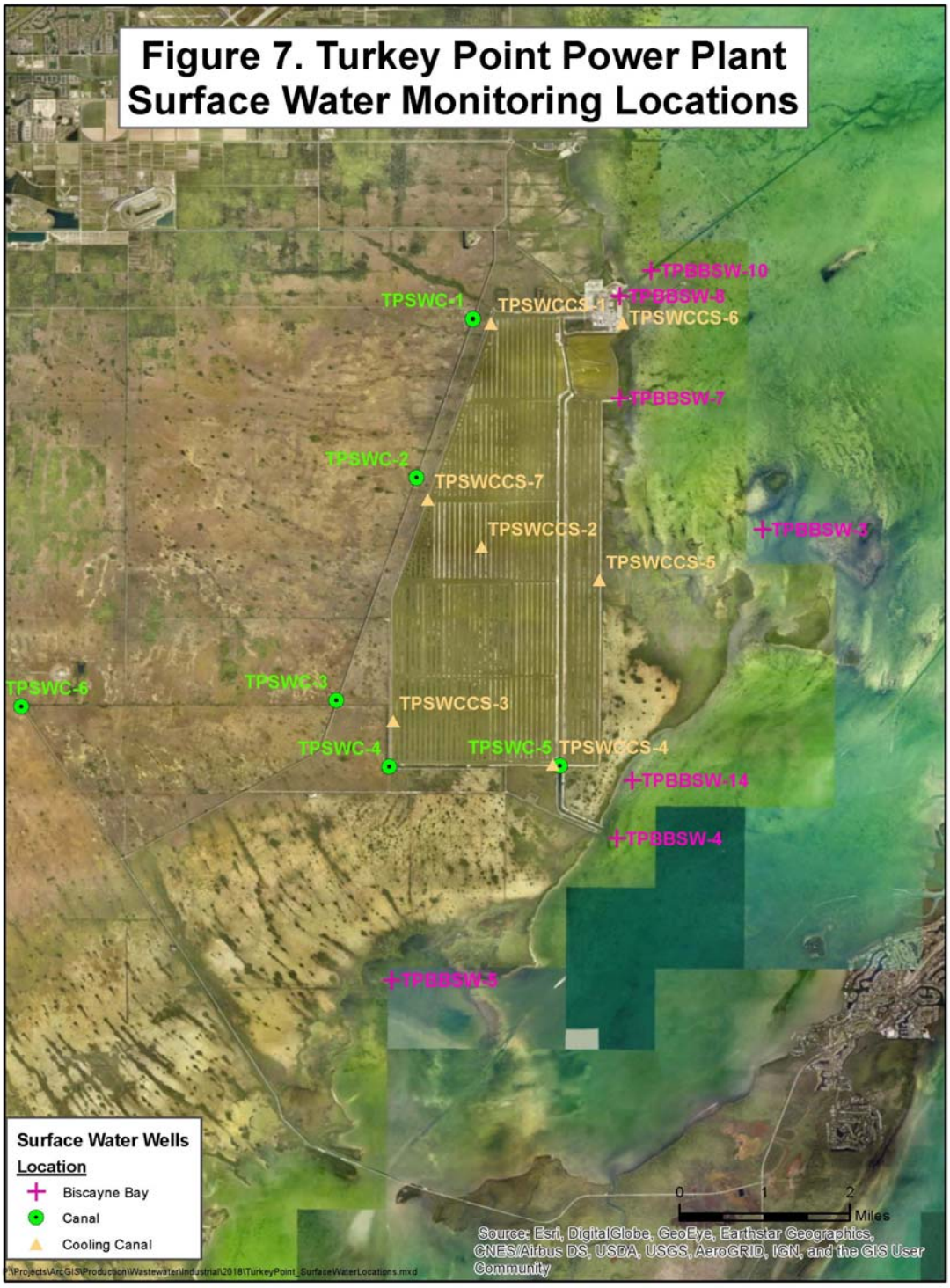
Figure 7. Turkey Point Power Plant
Surface Water Monitoring Locations
TPBBSW-10
TPBBSW-8
TPSWC-1
TPSWCCS-1
TPSWCCS-6
TPBBSW-7
TPSWC-2
TPSWCCS-7
TPSWCCS-2
TPBBSW-3
TPSWCCS-5
TPSWC-6
TPSWC-3
TPSWCCS-3
TPSWC-4
TPSWC-5
TPSWCCS-4
TPBBSW-14
TPBBSW-4
TPBBSW-5
Surface Water Wells
Location
Biscayne Bay
Canal
Cooling Canal
0
1
2
Miles
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
P:\Projects\ArcGIS\Production\Wastewater\Industrial\2018\TurkeyPoint_SurfaceWaterLocations.mxd

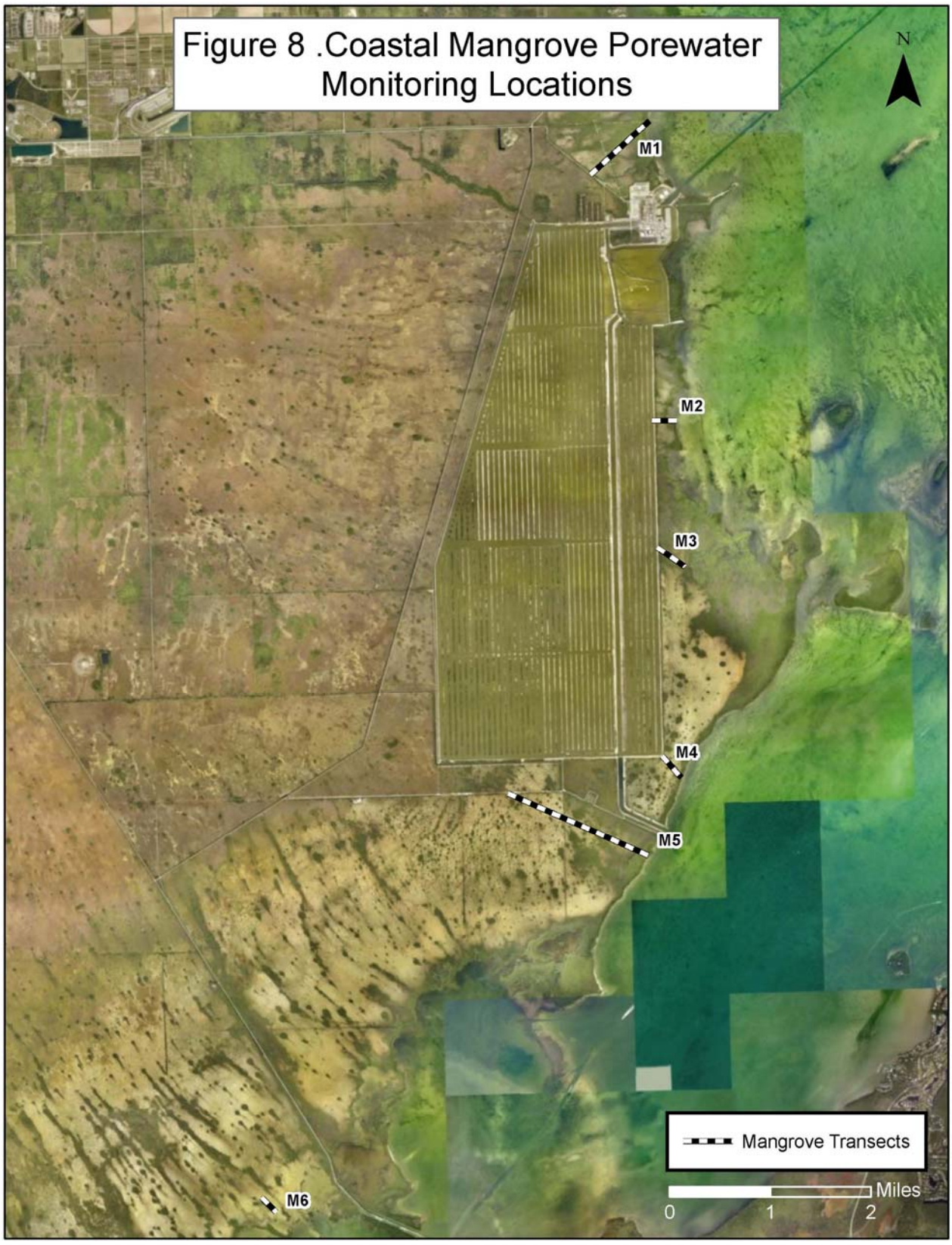
Figure 8 .Coastal Mangrove Porewater Monitoring Locations
N
M1
M2
M3
M4
M5
M6
Mangrove Transects
Miles
0
1
2


Figure 9. Turkey Point Power Plant
Groundwater Monitoring Locations
N
TPGW-20
TPGW-6
TPGW-19
TPGW-12
TPGW-10
TPGW-7
TPGW-1
G21
TPGW-15
TPGW-21
TPGW-5
TPGW-18
L3
TPGW-8
TPGW-11
TPGW-13
G28
L5
TPGW-2
TPGW-9
TPGW-16
TPGW-4
TPGW-17
TPGW-14
TPGW-3
Groundwater Wells
Miles
0
1
2

Figure 10. South Central and Card Sound Bay Segments