United States Environmental Protection Agency
Region 2
Clean Water Division
290 Broadway
New York, New York 10007

NPDES NO. PR0001031

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

The following Permittee is authorized to discharge subject to the requirements set forth in this permit:

Permittee (mailing address)	Facility (location address)
Puerto Rico Electric Power Authority	Palo Seco Power Plant
GPO Box 364267	PR165 KM. 3.8
San Juan, Puerto Rico 00936-4267	Levittown, Puerto Rico 00949
The EPA has classified this discharge as a **major** discharge.	

The Permittee may discharge from the discharge points identified below:

Outfall	Effluent description	Outfall latitude	Outfall longitude	Receiving water name and classification
001A	• Condenser Cooling Water • Cooling Towers Blowdown (Units 3&4) • Reverse osmosis plant reject water • Equipment Drains • Screens Washwater • Storm water runoff • Hydrostatic test performed in tanks • Groundwater from phreatic level • Fire Protection System test water	18°, 27′, 25″ N	66°, 9′, 45″ N	San Juan Bay via Old Bayamon River Bed, SC
001C	• Wastewater Treatment Plant Effluent • Cooling Towers Blowdown and Boiler Blowdown from the rerouted 001B • Equipment Drains • Storm water runoff • Hydrostatic test performed in tanks • Groundwater from phreatic level	18°, 27′, 26″ N	66°, 9′, 45″ N	San Juan Bay via Old Bayamon River Bed, SC
002	Storm water runoff	18°, 27′, 30″ N	66°, 9′, 45″ N	Boca Vieja Bay, SC

Issuance date	Effective date (EDP)	Expiration date	Renewal application date
February 4, 2016	April 1, 2016	March 31, 2021	September 30, 2020

To meet the provisions of the Clean Water Act (CWA) as amended, 33 *United States Code* (U.S.C.) 1251 *et seq.* and its implementing regulations, the Permittee shall comply with the requirements in this permit.

I, Joan Leary Matthews, Director, do hereby certify that this permit with all attachments is a full, true, and correct copy of the permit issued by EPA and certified by the Puerto Rico Environmental Quality Board, on February 4, 2016.

Joan Leary Matthews, Director
Clean Water Division
U.S. Environmental Protection Agency Region 2

CONTENTS

PART I. Background

PART II. Effluent Limitations and Monitoring Requirements

PART III. Reporting Requirements and Compliance Determination

PART IV. Standard and Special Conditions

Attachment A: Definitions

Attachment B: Standard Conditions

PART I. BACKGROUND

A. Rationale for Permit Requirements. This permit is issued pursuant to CWA section 402 and implementing regulations adopted by EPA. EPA developed the requirements in this permit on the basis of information submitted as part of the complete application and monitoring and reporting requirements, and other available information. This permit contains TBELS based on Effluent Limitations Guidelines and Standards for the Steam Electric Point Source Category in Part 423, and WQBELs based on the Puerto Rico Water Quality Standards Regulation (PRWQS), as amended. The accompanying Fact Sheet contains detailed information and rationale for permit requirements.

B. Water Quality Certificate. Pursuant to CWA section 401(a)(1), after due consideration of the applicable provisions established in the PRWQS and CWA sections 208(e), 301, 302, 303, 304(e), 306 and 307, on June 19, 2015 the Environmental Quality Board (EQB) certified that reasonable assurance was determined that the allowed discharge will not cause violations to the applicable water quality standards for the receiving water body if the limitations and monitoring requirements in the Water Quality Certificate are met. Additional requirements could be required to comply with other sections of the CWA.

C. Impaired Waters and Total Maximum Daily Loads (TMDLs). This facility does not discharge to an impaired water

D. Mixing Zone/Dilution Allowance. EQB has not approved a mixing zone or dilution allowance for this discharge.

E. Antidegradation and Anti-backsliding Requirements. The discharge is consistent with the federal anti-degradation provisions at 40 CFR 131.12, 72 Federal Register 238 (December 12, 2007, pages 70517-70526), and EQB's *Anti-Degradation Policy Implementation Procedure* in Attachment A of PRWQS. In addition, all effluent limitations in this permit are at least as stringent as the effluent limitations in the previous permit and are consistent with the anti-backsliding requirements at 40 CFR 122.44(l).

F. Public Participation. Federal regulations at 40 CFR 124 require EPA to consider all significant comments on the draft permit received during the public comment period in the development of the final permit. Any comments received will be provided in a Responsiveness Summary issued with the final permit.

PART II. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The Permittee shall maintain compliance with the following effluent limitations at Outfall **001A**, with compliance measured at Monitoring Location.

Effluent Limitations Table A-1 – Outfall 001A (condenser cooling water; cooling towers blowdown (units 3&4); reverse osmosis plant reject water; equipment drains; screens washwater; storm water runoff; hydrostatic test performed in tanks; groundwater from the phreatic level); fire protection system test water

Parameter	Units	Effluent limitations			Monitoring requirements		Footnotes
		Average monthly	Average weekly	Maximum daily	Sample type	Minimum sampling frequency	
Effluent Flow	m^3/day (mgd)	Monitor only	Monitor only	2.47×10^6 (652.0)	Continuous Monitoring or Estimated		(1)
BOD, 5-day (20°C)	mg/L			30	Composite	1/Year	
Chromium VI	ug/L			50.35	Grab	1/Year	
Color	Pt-Co Units	Shall not be altered by other than natural causes.			Grab	1/Month	(2)
Copper	ug/L			3.73	Grab	1/Month	
Cyanide, Free	ug/L			1.0	Grab	1/Month	(3)
Dissolved Oxygen	mg/L	Shall not contain less than 4.0 mg/l.			Grab	1/Month	
Mercury	ug/L			0.051	Grab	1/Month	(3)
Nickel	ug/L			Monitor Only	Grab	1/Month then 1/Year	(4)
Oil & Grease	mg/L	The waters of Puerto Rico shall be substantially free from floating non-petroleum oils and greases as well as petroleum derived oils and greases.			Grab	1/Month	
Oil & Grease	mg/L	15		20	Grab	1/Month	
Pentachlorophenol	ug/L			Monitor Only	Grab	1/Month then 1/Year	(4)

Parameter	Units	Effluent limitations			Monitoring requirements		Footnotes
		Average monthly	Average weekly	Maximum daily	Sample type	Minimum sampling frequency	
pH	standard units	Minimum 7.3 Maximum 8.5			Grab	1/Day	
Polychlorinated Biphenyls (PCBs)	ug/L	There shall be no discharge of Polychlorinated Biphenyl compounds such as those commonly used for transformer fluids.			Grab	1/Year	
Solids and Other Matter		The waters of Puerto Rico shall not contain floating debris, scum, or other floating materials attributable to the discharge in amounts sufficient to be unsightly or deleterious to the existing or designated uses of the waterbody.					
Sulfates	ug/L			Monitor only	Grab	1/Month then 1/Year	(4)
Sulfide (Undissociated H_2S)	ug/L			2	Grab	1/Month	(5)
Suspended, Colloidal or Settleable Solids	mL/L	Solids from wastewater source shall not cause deposition in or be deleterious to the existing or designated uses of the waterbody.			Grab	1/Month	
Taste and Odor Producing Substances		Shall not be present in amounts that will render any undesireable taste or odor to edible aquatic life.					
Temperature	°F (°C)	The discharge temperature shall not exceed 104.7 °F (40.4 °C). Further, the annual upper 99th percentile temperature shall not exceed 99 °F (33.5 °C). To comply with this limit, the temperature cannot exceed 99 °F (33.5 °C) on more than 4 days per year.			Grab	1/Day	
Thallium	ug/L			0.47	Grab	1/Month then 1/Year	(4)
Total Residual Chlorine	mg/l			0.2	Grab	1/Month	(6)
Total Suspended Solids	mg/l	30.0		100.0	Grab	2/Month	
Turbidity	NTU			10	Grab	1/Month	
Whole Effluent Toxicity	TU_a				24-hr Composite	1/Quarter	(7)

Notes, Footnotes and Abbreviations

(1) All flow measurements must achieve accuracy within the range of plus or minus (±) 10%. The daily maximum flow limitation does not considered the storm water discharged through Outfall 001

(2) Color shall be monitored at the effluent and at the receiving water body.

(3) The samples taken for the analysis of free cyanide and mercury shall be analyzed using the analytical method approved by the Environmental Protection Agency (EPA) with the lowest possible detection level, in accordance with Rule 1306.8 of the Puerto Rico Quality Standards Regulation (PRWQSR). The permittee shall use EPA Method 1631 to analyze for Mercury.

(4) The The permittee shall implement a monthly monitoring program using the analytical method approved by EPA with the lowest possible detection level, in accordance with Rule 1306.2 (C) of the PRWQSR as amended, for one (1) year period, after which they will be conducted annually. The monitoring program shall commence no later than thirty (30) days after the EDP. The results of the monitoring program shall be submitted to EQB and EPA-Region 2 no later than sixty (60) days of completion of the one year monitoring program. Based on the evaluation of the results obtained, EQB will determine if an effluent limitation or more frequent monitoring is necessary for this parameter. In such case the WQC and NPDES permit will be reopened to include the applicable effluent limitation or monitoring frequency, if necessary.

(5) The permittee shall use the approved EPA analytical method, with the lowest possible detection limit, in accordance with the 40 CFR, Part 136 for Sulfide (as S). Also, the permittee shall complete the calculations specified in Method 4500-S^{-2} F, Calculation of Un-ionized Hydrogen Sulfide, of Standards Methods 18th Edition, 1992, to determine the concentration of undissociated H_2S. If the sample results of Dissolved Sulfide are below the detection limit of the EPA approved method established in the 40 CFR, Part 136, then, the concentration of undissociated H_2S shall be reported as "below detection limit".

(6) If Chlorination is used for biofouling control, the concentration of Total Residual Chlorine shall not exceed 0.2 mg/L in the discharge. TRC may not be discharged from any single generating unit for more than two hours per day unless the permittee demonstrates to the permitting authority that discharge for more than two hours is required for macroinvertebrate control. Simultaneous multi-unit chlorination is permitted. The effluent limitation for TRC is in effect during chlorination.

(7) See Part IV.B.2. *Whole Effluent Toxicity Testing* for monitoring and reporting requirements for WET.

Effluent Limitations Table A-2 – Outfall 001-A2 (Cooling Tower Blowdown Intermittent Unit 3&4)

Parameter	Units	Effluent limitations		Monitoring requirements		Footnotes
		Average Daily	Maximum daily	Sample type	Minimum sampling frequency	
Flow	gpd			Estimate	1/Occurrence	(1)
Free Available Chlorine	mg/l	0.2	0.5	Multiple Grab	1/Occurrence	(1),(4),(5)
Total Residual Chlorine	mg/l		0.2	Multiple Grab	1/Occurrence	(1),(4),(5)
Total Zinc	mg/l	1.0	1.0	Grab	1/Occurrence	(1)
126 Priority Pollutants	ug/l	No detectable amount allowed.		Composite	1/Year	(2),(3),(6)
pH	SU	Shall always lie between 6.0 – 9.0		Grab	1/Occurrence	(1)

(1) Occurrence refers to each discharge of cooling tower blowdown wastes.

(2) Time-proportioned composite acceptable unless grab sample required by 40 CFR Part 136.

(3) First monitoring shall be performed at EDP + 180 days. For all Priority Pollutants which are not detected during this monitoring event. No further sampling and analyses will be required for the duration of this permit, unless there is a change in cooling tower chemical processes.

(4) Neither Free Available Chlorine (FAC) nor Total Residual Chlorine (TRC) may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless that utility can demonstrate to the EPA that the units in a particular location cannot operate at or below this level of chlorination.

(5) Multiple grabs shall consist of grab samples collected at the approximate beginning of TRC discharge and once every 15 minutes thereafter until the end of TRC discharge. "Daily Average" as it applies to FAC means the average of values taken over any individual chlorine release period and "Daily Maximum" as it applies to FAC means the instantaneous maximum at any time.

(6) Notice of any proposed use of compounds containing priority pollutants shall be made to EPA not later than 120 days prior to proposed use. Upon notice, EPA may modify this permit to authorize the use of such compound. Discharge of any product registered under the Federal insecticide, Fungicide, and Rodenticide Act is prohibited unless specifically authorized elsewhere in this permit.

To comply with the monitoring requirements for all parameters specified in Table A-2, samples shall be taken at internal sampling point 001-A2 prior to mixing with other waste streams.

Effluent Limitations Table A-3 – Outfall 001-A3 (Gas turbine equipment drains and storm water runoff)

Parameter	Units	Effluent limitations		Monitoring requirements		Footnotes
		Average Daily	Maximum daily	Sample type	Minimum sampling frequency	
Flow	gpd			Estimate	2/Month	
Total Suspended Solids	mg/l	30.0	100.0	Composite	2/Month	(1)
Oil and Grease	mg/l	15.0	20.0	Grab	2/Month	
pH		Shall always lie between 6.0 – 9.0		Grab	2/Month	

(1) Time-proportioned composite acceptable.

To comply with the monitoring requirements specified in Table A-3, samples shall be taken prior to mixing with other waste streams at sampling point 001-A3.

The Permittee shall maintain compliance with the following effluent limitations at Outfall **001C**, with compliance measured at Monitoring Location.

Effluent Limitations Table A-4 – Outfall 001C (wastewater treatment plant effluent; cooling towers blowdown and boiler blowdown from the rerouted 001b; equipment drains; storm water; runoff; hydrostatic test performed in tanks; groundwater from phreatic (saturated) zone)

Parameter	Units	Effluent limitations			Monitoring requirements		Footnotes
		Average monthly	Average weekly	Maximum daily	Sample type	Minimum sampling frequency	
Effluent Flow	m^3/day (mgd)			2801.2 (0.74)	Continuous Monitoring or Estimated		(1)
Arsenic	ug/L			36.00	Grab	1/Month then 1/Year	(2)
BOD 5-day (20ºC)	mg/L			30.0	Composite	1/Year	
Cadmium	ug/L			Monitor Only	Grab	1/Month then 1/Year	(2)
Color	Pt-Co Units	Shall not be altered by other than natural causes.			Grab	1/Month	(3)
Copper	ug/L			3.73	Grab	1/Month	
Cyanide, Free	ug/L			1.0	Grab	1/Month	(4)
Dissolved Oxygen	mg/L	Shall not contain less than 4.0 mg/l.			Grab	1/Month	
Mercury	ug/L			0.051	Grab	1/Month then 1/Year	(2), (4)
Nickel	ug/L			8.28	Grab	1/Month then 1/Year	(2)
Nitrogen (NO_3, NO_2, NH_3)	ug/L			Monitor Only	Grab	1/Month then 1/Year	(2)
Oil & Grease		The waters of Puerto Rico shall be substantially free from floating non-petroleum oils and greases as well as petroleum derived oils and greases.			Grab	1/Month	
Oil & Grease	mg/L	15		20	Grab	1/Month	
Pentachlorophenol	ug/l			Monitor Only	Grab	1/Month then 1/Year	(2)

Parameter	Units	Effluent limitations			Monitoring requirements		Footnotes
		Average monthly	Average weekly	Maximum daily	Sample type	Minimum sampling frequency	
pH	standard units	Minimum 7.3 Maximum 8.5			Grab	1/Day	
Polychlorinated Biphenyls (PCBs) (ug/L)	ug/L	There shall be no discharge of Polychlorinated Biphenyl compounds such as those commonly used for transformer fluids.			Grab	1/Year	
Silver (ug/L)	ug/L			2.24	Grab	1/Month	
Solids and Other Matter		The waters of Puerto Rico shall not contain floating debris, scum, or other floating materials attributable to the discharge in amounts sufficient to be unsightly or deleterious to the existing or designated uses of the waterbody.			--	--	
Sulfates (mg/L)	mg/L			2,800	Grab	1/Month then 1/Year	(2)
Sulfide (Undissociated H_2S)	ug/L			2	Grab	1/Month then 1/Year	(2), (5)
Suspended, Colloidal or Settleable Solids	mL/L	Solids from wastewater source shall not cause deposition in or be deleterious to the existing or designated uses of the waterbody.			Grab	1/Monthly	
Taste and Odor Producing Substances		Shall not be present in amounts that render any undesirable taste or odor to edible aquatic life.			--	--	
Temperature	°F (°C)	Except by natural causes, no heat may be added to the waters of Puerto Rico, which would cause the temperature of any site to exceed 90°F (32.2 °C)			Grab	1/Day	
Thallium	ug/l			0.47	Grab	1/Month	
Total Suspended Solids	mg/l			--	Composite	1/Month	
Turbidity	NTU			10	Grab	1/Month	

Notes, Footnotes and Abbreviations

(1) All flow measurements must achieve accuracy within the range of plus or minus (±) 10%.

(2) The permittee shall implement a monthly monitoring program using the analytical method approved by EPA with the lowest possible detection level, in accordance with Rule 1306.2 (C) of the PRWQSR as amended, for one (1) year period, after which they will be conducted annually. The monitoring program shall commence no later than thirty (30) days after the EDP. The results of the monitoring program shall be submitted to EQB and EPA Region 2 no later than sixty (60) days of completion of the one year monitoring program. Based on the evaluation of the results obtained, EQB will determine if an effluent limitation or more frequent monitoring is necessary for this parameter. In such case the WQC and NPDES permit will be reopened to include the applicable effluent limitation or revise the monitoring frequency, if considered necessary.

(3) Color shall be monitored at the effluent and at the receiving water body.

(4) The samples taken for the analysis of free cyanide and mercury shall be analyzed using the analytical method approved by the Environmental Protection Agency (EPA) with the lowest possible detection level, in accordance with Rule 1306.8 of the Puerto Rico Quality Standards Regulation (PRWQSR), as amended. The permittee shall use EPA Method 1631 for the analysis of mercury.

(5) The permittee shall use the approved EPA analytical method, with the lowest possible detection limit, in accordance with the 40 CFR, Part 136 for Sulfide (as S). Also, the permittee shall complete the calculations specified in Method 4500-S^{-2} F, Calculation of Un-ionized Hydrogen Sulfide, of Standards Methods 18th Edition, 1992, to determine the concentration of undissociated H_2S. If the sample results of Dissolved Sulfide are below the detection limit of the EPA approved method established in the 40 CFR, Part 136, then, the concentration of undissociated H_2S shall be reported as "below detection limit"

Effluent Limitations Table A-5 – Outfall 001-C1 (Wastewater treatment plant effluent)

Parameter	Units	Effluent limitations		Monitoring requirements		Footnotes
		Average Daily	Maximum daily	Sample type	Minimum sampling frequency	
Flow	Mgd		0.74	Continuous Recording		(1)
Copper	kg/day	1.7	1.7	Composite	1/Month	(2)
Iron	kg/day	1.7	1.7	Composite	1/Month	(2)
Total Suspended Solids	kg/day	51.1	170.4	Composite	1/Month	(2), (3)
Oil and Grease	mg/l	25.6	34.1	Grab	1/Month	
Free Available Chlorine	mg/l	0.2	0.5	Multiple Grab	1/Occurrence	(1), (5), (6)
Total Residual Chlorine	mg/l		0.2	Multiple Grab	1/Occurrence	(1), (5), (6)
Total Chromium	mg/l	0.2	0.2	Grab	1/Occurrence	(1)
Total Zinc	mg/l	1.0	1.0	Grab	1/Occurrence	(1)
126 Priority Pollutants	ug/l	No detectable amount allowed.		Composite	1/Occurrence	(3), (4), (7)
pH	S.U.	Shall always lie between 6.0 – 9.0		Grab	1/Day	(1)

(1) Occurrence refers to each discharge of cooling tower blowdown wastes.

(2) All limitations expressed in mass calculated from concentration-based limitations are calculated according to: mass (kg/day) = Flow (MGD) x concentration (mg/L) x 3.78 (kg/L)/(mg)(mgd).

(3) Time-proportioned composite acceptable unless grab sample required by 40 CFR Part 136.

(4) First monitoring shall be performed at EDP + 180 days.For all Priority Pollutants which are not detected during this monitoring event. No further sampling and analyses will be required for the duration of this permit, unless there is a change in cooling tower chemical processes.

(5) Neither Free Available Chlorine (FAC) nor Total Residual Chlorine (TRC) may be discharged from any unit for more than two hours in any one day and note more than one unit in any plant may discharge free available or total residual chlorine at any one time unless that utility can demonstrate to the EPA that the units in a particular location cannot operate at or below this level of chlorination. The effluent limitations for FAC and TRC apply to the blowdown contribution.

(6) Multiple grabs shall consist of grab samples collected at the approximate beginning of TRC discharge and once every 15 minutes thereafter until the end of TRC discharge. "Daily Average" as it applies to FAC means the average of values taken over any individual chlorine release period and "Daily Maximum" as it applies to FAC means the instantaneous maximum at any time.

(7) Notice of any proposed use of compounds containing priority pollutants shall be made to EPA not later than 120 days prior to proposed use. Upon notice, EPA may modify this permit to authorize the use of such compound. Discharge of any product registered under the Federal insecticide, Fungicide, and Rodenticide Act is prohibited unless specifically authorized elsewhere in this permit.

To comply with the monitoring requirements specified in Table A-5, samples shall be taken prior to mixing with other waste streams at sampling point 001-C1.

The Permittee shall maintain compliance with the following effluent limitations at Outfall 002, with compliance measured at Monitoring Location.

Effluent Limitations Table A-6 – Outfall 002 (storm water runoff)

Parameter	Units	Effluent limitations			Monitoring requirements		Footnotes
		Average monthly	Average weekly	Maximum daily	Sample type	Minimum sampling frequency	
Chemical Oxygen Demand	mg/L			100	Composite	WFO	
Color	Pt-Co Units	Shall not be altered by other than natural causes.			Grab	WFO	
Dissolved Oxygen	mg/L	Shall not contain less than 4.0 mg/l.			Grab	WFO	
Nickel	ug/L			Monitor only	Grab	WFO	
Oil & Grease		The waters of Puerto Rico shall be substantially free from floating non-petroleum oils and greases as well as petroleum derived oils and greases.			Grab	WFO	
Oil & Grease	mg/L	15		20	Grab	WFO	
pH	standard units	Minimum 7.3 Maximum 8.5			Grab	WFO	
Polychlorinated Biphenyls (PCBs) (ug/L)	ug/L			Monitor only	Grab	WFO	
Solids and Other Matter		The waters of Puerto Rico shall not contain floating debris, scum, or other floating materials attributable to the discharge in amounts sufficient to be unsightly or deleterious to the existing or designated uses of the waterbody.				WFO	
Suspended, Colloidal or Settleable Solids	ml/l	Solids from wastewater source shall not cause deposition in or be deleterious to the existing or designated uses of the waterbody.			Grab	WFO	
Taste and Odor Producing Substances		Shall not be present in amounts that will interfere with the primary contact recreation, or will render any undesirable taste or odor to edible aquatic life.			Grab	WFO	

Parameter	Units	Effluent limitations			Monitoring requirements		Footnotes
		Average monthly	Average weekly	Maximum daily	Sample type	Minimum sampling frequency	
Temperature	°F (°C)	Except by natural causes, no heat may be added to the waters of Puerto Rico, which would cause the temperature of any site to exceed 90°F (32.2°C)			Grab	WFO	
Turbidity	NTU			10	Grab	WFO	

To comply with the monitoring requirements specified above, samples shall be taken at sampling point for discharge 002.

All flow measurements shall achieve accuracy within the range ±10%

WFO: storm water discharge to the receiving water body occurs during normal business hours of the facility, achieving at least one rainfall runoff sampling per month (Special Condition IV.B.1.v)

Color shall be monitored at the effluent and at the receiving water body.

a. Narrative Limitations

In accordance with 40 CFR 122.44(d), the permit establishes the following narrative limitations.

1. The waters of Puerto Rico shall not contain any substance, attributable to the discharge at such concentration which, either alone or as result of synergistic effects with other substances, is toxic or produces undesirable physiological responses in humans, fish, or other fauna or flora.
2. The discharge shall not cause the presence of oil sheen in the receiving water body.
3. The waters of Puerto Rico shall not contain floating debris, scum, or other floating materials attributable to discharges in amounts sufficient to be unsightly or deleterious to the existing or designated uses of the water body.
4. Solids from wastewater sources shall not cause deposition in or be deleterious to the existing or designated uses of the waters.
5. Taste and odor-producing substances shall not be present in amounts that will interfere with primary contact recreation, or will render any undesirable taste or odor to edible aquatic life.
6. Color shall not be altered other than natural phenomena.
7. There shall be no discharge of Polychlorinated Biphenyl compounds such as those commonly used for transformer fluids. Compliance shall be demonstrated by a "non-detectable" or "less than" value at the Method Detection Limit (MDL) using EPA approved Method 608 in accordance with EPA approved test procedures as specified in 40 CFR Part 136.

b. Monitoring Requirements

1. Effluent monitoring and analyses shall be conducted in accordance with EPA test procedures approved under 40 CFR Part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act,* as amended. For situations where there may be interference, refer to *Solutions to Analytical Chemistry Problems with Clean Water Act Methods* (EPA 821-R-07-002). For effluent analyses, the Permittee shall use a *Minimum Level (ML)* that is lower than the effluent limitations described in Effluent Limitations Table of this permit. If all published MLs are higher than the effluent limitations, the Permittee shall use the test method procedure with the lowest ML. The Permittee shall ensure that the laboratory uses a standard calibration where the lowest standard point is equal to or less than the ML. Priority pollutant analysis for metals shall measure *total metal*, except as provided under 40 CFR 122.45(c). EPA method 1631E shall be used for mercury analysis. Priority pollutant analysis for benzene, ethylbenzene, toluene and xylene shall employ either EPA Method 602 or 624. Effluent analysis for xylene shall measure *total xylene*.
2. The regulations at 40 CFR 122.48 require that all NPDES permits specify monitoring and reporting requirements. All monitoring shall be in accordance with Standard Condition *10. Monitoring and records* in Attachment B of this permit.
3. The Permittee shall develop and implement a quality assurance (QA) plan for laboratory analyses for effluent and/or receiving water monitoring.

c. Monitoring Locations

The Permittee shall establish the following monitoring locations to demonstrate compliance with the effluent limitations and other requirements in this permit:

Monitoring Locations Table

Outfall	Effluent description	Monitoring Location	Monitoring Location Description	Receiving water name and classification
001A	• Condenser Cooling Water • Cooling Towers Blowdown (Units 3&4) • Reverse osmosis plant reject water • Equipment Drains • Screens Washwater • Storm water runoff • Hydrostatic test performed in tanks • Groundwater from phreatic level • Fire Protection System test water	18°, 27′, 25″ 66°, 9′, 45″	Sluice Gate just north of main gate to Palo Seco Power Plant	San Juan Bay via Old Bayamon River Bed, SC
001-A2	Cooling Tower Blowdown Intermittent Unit 3 & 4			Internal Monitoring Point discharging to Outfall 001A
001-A3	Gas Turbine equipment drains and storm water runoff			Internal Monitoring Point discharging to Outfall 001A
001C	• Wastewater Treatment Plant Effluent • Cooling Towers Blowdown and Boiler Blowdown from the rerouted 001B • Equipment Drains • Storm water runoff • Hydrostatic test performed in tanks • Groundwater from phreatic (saturated) zone	18°, 27′, 26″; 66°, 9′, 45″	Northeast and Downstream from Outfall 001A, south of Wastewater Treatment Plant	Bahia de San Juan via Old Bayamon River Bed, SC
001C-1	Wastewater treatment plant treated effluent			Internal Monitoring Point discharging to Outfall 001C
002	Storm Water	18°, 27′, 30″; 66°, 9′, 45″	Northwest side of facility, near cooling water intake	Boca Vieja Bay, SC

PART III. REPORTING REQUIREMENTS AND COMPLIANCE DETERMINATION

A. Reporting Requirements

1. **Standard Conditions**. The Permittee shall comply with all Standard Conditions in section IV.A below and Attachment B of this permit related to monitoring, reporting, and recordkeeping.

2. **Monitoring data submission.** The Permittee shall submit monitoring data to EPA electronically using NetDMR, a web-based tool that allows Permittees to electronically submit discharge monitoring reports (DMRs) via a secure internet connection. Specific requirements regarding submittal of data and reports in hard copy form and for submittal using NetDMR are described below:

   a. **Submittal of Reports Using NetDMR**. DMR submittals must be submitted in accordance with Standard Condition *12.d. Monitoring reports* in Attachment B of this permit. The Permittee will report the results for all monitoring specified in this permit. The Permittee shall submit monthly DMRs including the results of all required monitoring using EPA-approved test methods or other test methods specified in this permit as required. If the Permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring must be included in the calculation and reporting of the data submitted in the DMR. DMRs and reports submitted electronically to EPA must be done using NetDMR at http://www.epa.gov/netdmr.

   b. **Submittal of Reports in Hard Copy.** Non-DMR reports must be submitted in accordance III.A.3. Permittees shall continue to send hard copies of reports other than DMRs to the EPA and EQB until further notice from the EPA and EQB.

   c. **Timing of submissions**. DMRs shall be submitted to EPA no later than the 28th day of the month following the completed reporting period. Monitoring results shall be summarized and reported using netDMR. The first report is due on May 28, 2016.

   d. **If the EPA Electronic Reporting Rule (40 CFR §127) is finalized and goes into effect during this Permit term, the permittee must submit its DMRs and NPDES-related reports in accordance with the rule as soon as is reasonably practical.**

3. **Submission Requirements**. If submitting reports in hard copy form, DMRs must be signed and certified as required by Standard Condition *11. Signatory requirements* in Attachment B of this permit. The Permittee shall submit the original signed DMR to 3.a below and duplicate signed copies and all other reports required in this permit to 3.b below:

   a. U.S. Environmental Protection Agency, Region 2
   290 Broadway, 21st Floor
   New York, NY 10007-1866
   Attention: Compliance Assistance and Program Support Branch

   b. Puerto Rico Environmental Quality Board
   P.O. Box 11488
   Santurce, PR 00910
   Attention: Water Quality Bureau

4. **Analytical Determinations**. The Permittee shall report the results on the DMR of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the ML must be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the ML must be reported as <ML, where the ML equals the ML reported by the laboratory.

   c. Permittees are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. **Bacterial Monitoring**. For bacterial monitoring, the Permittee shall report on the DMR the calculated geometric mean and the percentage of individual samples that exceeded the single-sample maximum criterion. The geometric mean must be calculated on the basis of five grab samples taken within the calendar month and as described in Attachment A. *Definitions* of this permit. The Permittee shall report on an attachment to the DMR the analytical results of each of the five individual sample measurements, the calculated geometric means using these individual samples, and the percentage of individual samples that exceed the single sample maximum criterion.

B. Compliance Determination

Compliance with effluent limitations contained in this permit will be determined as specified below:

1. **General**. Compliance with effluent limitations for priority pollutants must be determined using sample reporting protocols defined in section III. A and Attachment A. *Definitions*.
2. **Average Monthly Discharge Limitation (AML)**. If the average or, when applicable, the median of daily discharges that were measured in a calendar month exceeds the AML for a given parameter, this will represent a single violation, though the Permittee will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of noncompliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AML, the Permittee will be considered out of compliance for that calendar month. The Permittee will be considered out of compliance for only the days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken yet sampling is required, the Permittee will be considered out of compliance for that calendar month.
3. **Average Weekly Discharge Limitation (AWL)**. If the average or, when applicable, the median of daily discharges over a calendar week exceeds the AWL for a given parameter, this will represent a single violation, though the Permittee will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of noncompliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWL, the Permittee will be considered out of compliance for that calendar week. The Permittee will be considered out of compliance for only the days when the discharge occurs. For any one calendar week during which no sample (daily discharge) is taken yet sampling is required, the Permittee will be considered out of compliance for that calendar week.
4. **Maximum Daily Discharge Limitation (MDL)**. If a daily discharge exceeds the MDL for a given parameter, the Permittee will be considered out of compliance for that parameter for that 1 day only in the reporting period. For any one day during which no sample is taken yet a sampling is required, the Permittee will be considered out of compliance for that day.

PART IV. STANDARD AND SPECIAL CONDITIONS

A. Standard Conditions

1. Standard Conditions Applicable to All Facilities

a. The Permittee shall comply with all Standard Conditions that apply to all NPDES permits in accordance with 40 CFR 122.41 (Attachment B of this permit), and additional conditions applicable to specific categories of facilities in accordance with 40 CFR 122.42.

b. The Permittee shall comply with the Reopener Clause in Standard Condition *17. Reopener clause for toxic effluent limitations*, in Attachment B of this permit, which applies to all NPDES permits in accordance with 40 CFR 122.44(b). EPA reserves the right to revoke and reissue or modify this permit to establish effluent limitations, additional monitoring, schedules of compliance or other permit conditions based on new information, including any changes to the final Water Quality Certificate from EQB.

2. Standard Conditions Applicable to Specific Facilities—Notification Levels

The permittee must notify EPA as soon as it knows or has reason to believe [40 CFR 122.42(a)]:

a. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this permit, if that discharge will exceed the highest of any one of the following *notification levels* [40 CFR 122.42(a)(1)]:

i. 100 micrograms per liter (µg/L) [40 CFR 122.42(a)(1)(i)].

ii. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4 dinitrophenol and 2 methyl 4,6 dinitrophenol; and 1 milligrams per liter (mg/L) for antimony [40 CFR 122.42(a)(1)(ii)].

iii. Five times the maximum concentration value reported for that pollutant in the DMR [40 CFR 122.42(a)(1)(iii)].

iv. The level established by EPA in accordance with 40 CFR 122.44(f) [40 CFR 122.42(a)(1)(iv)].

b. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this permit, if that discharge will exceed the highest of any one of the following *notification levels* [40 CFR 122.42(a)(2)]:

i. 500 µg/L [40 CFR 122.42(a)(2)(i)].

ii. 1 mg/L for antimony [40 CFR 122.42(a)(2)(ii)].

iii. Ten times the maximum concentration value reported for that pollutant in the DMR [40 CFR 122.42(a)(2)(iii)].

iv. The level established by EPA in accordance with 40 CFR 122.44(f) [40 CFR 122.42(a)(2)(iv)].

B. Special Conditions

1. Special Conditions from the Water Quality Certificate

a. The flow of discharge 001A, and 001C shall not exceed the limitation of 2.47 x 10^6 m^3/day (652.0 MGD), and 2,801.2 m^3/day (0.74 MGD) as daily maximum, respectively. No increase in flow of the aforementioned discharges shall be authorized without a recertification from the Puerto Rico Environmental Quality Board (EQB).

b. The flow of the wastewater treatment plant shall not exceed the limitation of 2,801.2 m^3/day (0.74 MGD) as daily maximum. No increase in flow shall be authorized without a recertification from the Puerto Rico Environmental Quality Board (EQB).

c. The discharge 002 will only consist of waters composed entirely of storm water.

d. No changes in the design or capacity of the treatment system will be permitted without the previous authorization of EQB.

e. Prior to the construction of any additional treatment system or the modification of the existing one, the permittee shall obtain the approval from EQB of the engineering report, plans and specifications.

f. The permittee shall install, maintain and operate all water pollution control equipment in such manner as to be in compliance with the applicable Rules and Regulations.

g. No toxic substances shall be discharged, in toxic concentrations, other than those allowed as specified in the NPDES permit. Those toxic substances included in the permit renewal application, but not regulated by the permit, shall not exceed those concentrations as specified in the applicable regulatory limitations.

h. The waters of Puerto Rico shall not contain any substance attributable to discharge 001A, 001C and 002, at such concentration which, either alone or as a result of synergistic effect with other substances, is toxic or produces undesirable physiological responses in human, fish or other fauna or flora.

i. The discharges 001A, 001C, and 002 shall not cause the presence of oil sheen in the receiving water body.

j. All sample collection, preservation, and analysis shall be carried out in accordance with the Title 40 of the Code of Federal Regulations (40 CFR), Part 136. A licensed chemist authorized to practice the profession in Puerto Rico shall certify all chemical analyses. All bacteriological tests shall be certified by a microbiologist or a licensed medical technologist authorized to practice the profession in Puerto Rico.

k. The samples taken for the analysis of free cyanide and mercury shall be analyzed using the analytical method approved by the Environmental Protection Agency (EPA) with the lowest possible detection level, in accordance with Rule 1306.8 of the Puerto Rico Quality Standards Regulation (PRWQSR), as amended.

l. The permittee shall use the approved EPA analytical method, with the lowest possible detection limit, in accordance with the 40 CFR, Part 136 for Sulfide (as S). Also, the permittee shall complete the calculations specified in Method 4500-S^{-2} F, Calculation of Un-ionized Hydrogen Sulfide, of Standards Methods 18th Edition, 1992, to determine the concentration of undissociated H_2S. If the sample results of Dissolved Sulfide are below the detection limit of the EPA approved method established in the 40 CFR, Part 136, then, the concentration of undissociated H_2S shall be reported as "below detection limit".

m. Within thirty (30) days after the Effective date of the NPDES Permit (EDP), the permittee shall submit for EQB evaluation and approval, a method to measure or estimate flow at discharges 001A, 001C and 002. If flow-measuring devices are installed, they must be periodically calibrated and properly maintained. Calibration and maintenance records must be kept in compliance with the applicable Rules and Regulations.

n. If flow-measuring devices are installed, the sampling points for discharge 001A, 001C and 002 shall be located immediately after them.

o. The sampling points for discharge 001A, 001C and 002 shall be labeled with 18 inches per 12 inches (minimum dimensions) signs that read as follow:

"Punto de Muestreo para la Descarga 001A"
"Punto de Muestreo para la Descarga 002-A2
"Punto de Muestreo para la Descarga 002-A3
"Punto de Muestreo para la Descarga 001C"
"Punto de Muestreo para la Descarga 001C-1"
"Punto de Muestreo para la Descarga 002"

p. The sampling point for discharge 002 shall be accessible and free of vegetation, debris, trash, etc., at any time.

q. All water or wastewaters treatment facilities, whether publicly or privately owned, must be operated by a person licensed by the Potable Water and Wastewaters Treatment Plants Operators Examining Board of the Commonwealth of Puerto Rico.

r. The solid wastes (sludge, screenings and grit) generated due to the wastewater treatment system operation shall be:

i. Disposed in compliance with the applicable requirements established in the 40 CFR, Part 257.

ii. No later than ninety (90) days after the Effective Date of the NPDES Permit (EDP) the permittee shall submit to EQB and EPA a report notifying the disposal method of the solid waste (sludge, screening and grit) generated due to the operation of the treatment system. The permittee shall notify if any change of the method or methods used to dispose the solid waste generated in the facility occurs.

iii. Transported adequately in such way that access is not gained to any water body or soil. In the event of a spill of solid wastes on land or into a water body, the permittee shall notify the Point Sources Permits Division of the EQB's Water Quality Area in the following manner:

(a) By telephone communication within a term no longer than twenty four (24) hours after the spill (787-767-8073).

(b) By letter, within a term no longer than five (5) days after the spill.

These notifications shall include the following information:

(c) spill material,
(d) spill volume,
(e) measures taken to prevent the spill material to gain access to any water body.

This special condition does not relieve the permittee from its responsibility to obtain the corresponding permits from the EQB's Land Pollution Control Area and other state and federal agencies, if any.

s. A log book shall be kept for the material removed from the wastewater treatment system, such as sludge, screenings and grit, detailing the following items:

i. removed material, date and source of it;
ii. approximate volume and weight;
iii. method by which it is removed and transported;
iv. final disposal and location;
v. person that performs the service.

A copy of the Non-Hazardous Solid Wastes Collection and Transportation Service Permit issued by the authorized official from EQB shall be attached to the log book.

t. The rain gauge installed in the facility shall be properly maintained. Maintenance records of the rain gauge must be kept. In case of the modification, repair or replacement of such measuring device, it shall be calibrated again if it is necessary.

u. The permittee shall keep daily records of rain events, indicating the date, reading of the rain gauge and duration for such events during normal business hours of the facility. Copy of these records shall be submitted monthly to EQB.

v. WHEN FLOW OCCURS (WFO)

WFO - For the purposes of this permit, WFO means when a storm water discharge to the receiving water body occurs during normal business hours of the facility, achieving at least one rainfall runoff sampling per month.

i. First Half of Month

During the first fifteen (15) days of the month, sampling shall be as follows: A minimum period of 48 hours without measurable precipitation (measurable precipitation being rainfall greater than 0.1 inch) shall precede the storm event to be sampled. For those parameters which require grab samples, the sample shall be taken during the first thirty (30) minutes of storm water discharge.

ii. Second Half of Month

In the event that the permittee is unable to satisfy the above condition during the first fifteen (15) days of the month, beginning on the sixteenth (16th) day of the month, the permittee shall sample any storm water discharge which occurs during normal business hours of the facility.

iii. General Requirements

The permittee must report in a cover letter attached to each Discharge Monitoring Report (DMR), details of the conditions under which the storm water samples were taken and the date of sampling.

Alternatively, if no sample was taken during the month, the permittee shall be deemed to have met the sampling requirements if the permittee certifies that it was not possible to satisfy the specified sampling protocol during the first fifteen (15) days of the month and that there was no measurable discharge of storm water during normal business hours from the sixteenth (16th) day of the month until the last day of the month.

w. The storm water discharges associated with industrial activities covered by this WQC will not cause violations to the applicable water quality standards at the receiving water body.

2. Whole Effluent Toxicity Testing

Acute Whole Effluent Toxicity Testing

a. **Monitoring Frequency and Sample Type**. Not later than September 30, 2016, the Permittee shall conduct quarterly acute toxicity tests on a 24-hour composite effluent sample. Acute toxicity test samples shall be collected for each point of discharge at the designated monitoring location for the effluent (i.e., downstream from the last treatment process and any in-plant flow return flows where a representative effluent sample can be obtained).

b. **Methods**. The acute toxicity tests shall be conducted in accordance with the EPA document, *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA-821-R-02-012, Fifth Edition, 2002) and Table IA of 40 CFR Part 136. Tests shall provide a measure of the acute toxicity as determined by the effluent concentration that causes 50 percent mortality of the test organisms over a 48-hour period.

The tests must be static renewal tests. The acute toxicity tests shall provide a measure of the acute toxicity as determined by the effluent concentration that represents the LC_{50}. Test results shall be expressed in terms of the LC_{50} and reported in TU_a on the monthly DMR, where $TU_a = 100 / LC_{50}$.

If the acute WET test does not meet all test acceptability criteria as specified in the test method, the Permittee shall re-sample and re-test as soon possible, not to exceed 14 days following notification of invalid test results. Data from invalid and valid tests must be submitted in the Permittee's DMR.

c. **Test Species**. The test species shall be silverside *(menidia beryllina)* and mysid *(mysidopsis bahia).*

d. **Numeric Effluent Limitation or Trigger**. There is **no** acute WET effluent limitation for this discharge. *There is, however, an acute WET trigger of 0.3 TUa.* The acute WET trigger is any one test result with an LC50 concentration less than 100% (during the monthly reporting period). Acute test results with LC50 values greater than 100% shall be interpreted as "pass" and meeting the acute trigger of 0.3 TUa. This permit requires additional toxicity testing if the acute WET limit or trigger is exceeded (see *Accelerated Toxicity Testing and TRE Initiation* of this part).

e. **Dilution Allowance**. For this discharge, EQB has not authorized a mixing zone or dilution allowance for acute toxicity. The In-stream Waste Concentration (IWC) is 100% effluent for this discharge. A series of five dilutions, including the IWC of 100% effluent, and two reference toxicants (a positive and negative control) must be tested.

The chronic toxicity tests shall provide a measure of the chronic toxicity as determined by the effluent concentration that represents the No Observable Effects Concentration (NOEC). Test results shall be expressed in terms of the NOEC and reported in TU_c on the monthly DMR, where $TU_c = 100/NOEC$.

If the chronic WET test does not meet all test acceptability criteria as specified in the test method, the Permittee shall re-sample and re-test as soon possible, not to exceed 14 days following notification of invalid test results. Data from invalid and valid tests must be submitted in the Permittee's DMR.

f. **Test Species**. The test species shall be Menidia beryllina and mysid (Mysidopsis bahia). The test shall be static renewal type.

g. **WET Notification Requirements**. The Permittee shall notify EPA within 48-hours after the receipt of test results exceeding the effluent limitation or monitoring trigger during regular or accelerated monitoring.

h. **Toxicity Reduction Evaluation (TRE) Workplan**. Within 90 days after the effective date of this permit, the Permittee shall prepare and submit a TRE Workplan to EPA, which must include steps the Permittee intends to follow if toxicity is measured in the effluent. The workplan must include, at a minimum:

i. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

ii. A description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the facility.

iii. Potential actions to be undertaken by the Permittee to investigate, identify, and correct the causes, and prevent the recurrence of toxicity.

iv. Identification of responsible persons/parties for conducting the TRE.

v. Possible source reduction measures and pollution prevention measures opportunities to reduce toxicity.

e. **Accelerated Toxicity Testing and TRE Initiation**. If the discharge displays an acute or chronic toxicity result that exceeds the effluent limitation or trigger, the Permittee shall conduct six additional toxicity tests of the discharge using the same species and test method as that of the observed toxicity, every two weeks, over a 12 week period.

i. Accelerated testing shall begin within 14 days of the Permittee's receipt of the test result exceeding the effluent limit or trigger. If none of the six additional toxicity tests exceeds the effluent limit or trigger, then the Permittee may return to its regular testing frequency. All accelerated laboratory test results shall be submitted to EPA and EQB within 30 days of receipt by the Permittee, as required in the Reporting of Toxicity Monitoring Results section below.

ii. If the result of any accelerated toxicity test for the discharge exceeds the effluent limit or trigger, the Permittee is in violation of this permit and must cease accelerated monitoring and initiate a TRE within 14 days of receipt of this test result to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. The TRE must use the same species and test method as that of the observed toxicity. The Permittee shall use the following EPA guidance manual to conduct the TRE: *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA-600-2-88-070, 1989).

iii. The Permittee may also use the following manuals for Toxicity Identification Evaluation (TIE) to identify and abate the causes of toxicity:

(a) *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA-600-6-91-005F, 1992).

(b) *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA-600-R-92-080, 1993).

(c) *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA-600-R-92-081, 1993).

(d) *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA-600-R-96-054, 1996).

iv. The Permittee shall submit accelerated test results within 30 days after the Permittee's receipt of the laboratory reports for accelerated monitoring. Test results that were conducted because of accelerated monitoring may be used to satisfy the normal **acute** Toxicity Testing requirements above, provided that all requirements (including species, test type, frequency, timing, and sample requirements) are met.

f. **Reporting of Toxicity Monitoring Results**. For any WET testing event, the Permittee shall report the WET results in TU_a or TU_c on the DMR for the month in which the toxicity test was conducted. In addition, a full laboratory report must be submitted to the addresses in Part III.A.3 of this permit as an attachment to the DMR, reported according to the test methods manual chapter on report preparation and test review, and must include, at a minimum, the following:

i. The acute WET toxicity results expressed in LC_{50} and TU_a. For tests where the IWC is 100 percent effluent that does not result in a toxic response, the result shall be reported at <0.3 TU_a.

ii. The dates of sample collection and initiation of each toxicity test.

iii. The statistical methods used to calculate endpoints.

iv. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD).

v. All results for effluent parameters monitored concurrently with the toxicity test(s).

vi. The results compared to the numeric toxicity effluent limitation or trigger.

vii. Progress reports on any TRE/TIE investigations.

Toxicity Reporting Table

Task	Due Date
Submit a TRE Workplan	**June 30, 2016**
Submit WET Report for quarterly monitoring	28th day of the month following the completed monitoring
Submit WET Report for annual monitoring	28th day of the month following the completed monitoring
Notify Toxicity in Effluent	<48 hours of receipt of test results that exceed limit or trigger
Conduct Accelerated Monitoring	≤ 14 days of exceedance of limit or trigger
Submit Accelerated Monitoring Report	≤ 30 days of receipt of test results
Initiate a TRE	≤ 14 days of accelerated test results that exceed limit or trigger

g. **Reopener Clause for Toxicity**. In accordance with 40 CFR Parts 122 and 124, this permit may be reopened to establish additional toxicity requirements to address toxicity in the effluent or receiving water, including other toxicity/treatability studies, effluent limitations or monitoring requirements.

3. Preventive Maintenance Plan (PMP) and Pollution Prevention

a. **Implementation**. The Permittee, must develop and implement a PMP that achieves the objectives and the specific requirements listed below. A copy of the plan must be submitted to the addresses in Part III.A.3 of this permit within six months of the EDP. The plan must be implemented as soon as possible but no later than nine months from the EDP. The Permittee shall update and amend the plan as needed.

b. **Purpose**. Through implementation of the PMP, the Permittee shall prevent or minimize the generation and the potential for the release of pollutants from the facility to the waters of the United States through normal operations and ancillary activities.

c. **Objectives**. The Permittee shall develop and amend the PMP consistent with the following objectives for the control of pollutants.

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

ii. Under the PMP, and any Standard Operating Procedures (SOPs) included in the plan, the Permittee shall ensure proper operation and maintenance of the treatment facility as required by 40 CFR 122.41(e).

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

(a) Each facility component or system must be examined for its waste minimization opportunities and its potential for causing a release of significant amounts of pollutants to waters of the United States because of equipment failure, improper operation, and natural phenomena such as rain or snowfall, etc. The examination must include all normal operations and ancillary activities including 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, or drainage from raw material storage.

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

d. **Requirements**. The PMP shall be consistent with the objectives in the Objectives section above and the general guidance contained in the publication titled *Guidance Manual for Developing Best Management Practices (BMPs)* (EPA 833-B-93-004, 1993) or any subsequent revisions to the guidance document.

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

(a) Name and location of the facility.

(b) Statement of PMP policy.

(c) Structure, functions, and procedures of the PMP Committee.

(d) Specific management practices and standard operating procedures to achieve the above objectives, including modifying equipment, facilities, technology, processes, and procedures; reformulating or redesigning products; substituting materials; and improving management, inventory control, materials handling or general operational phases of the facility.

(e) Risk identification and assessment.

(f) Reporting of PMP incidents.

(g) Materials compatibility.

(h) Good housekeeping.

(i) Preventative maintenance.

(j) Inspections and records.

(k) Security.

(l) Employee training.

ii. The PMP shall include the following provisions concerning PMP review:

(a) Review by plant engineering staff and the plant manager.

(b) Review and endorsement by the Permittee's PMP Committee.

(c) A statement that the above reviews have been completed and that the PMP fulfills the requirements set forth in this permit. The statement must include the dated signatures of each BMP Committee member as certification of the reviews.

iii. The PMP shall establish specific BMPs to meet the objectives identified in the Objectives section above, addressing each component or system capable of generating or causing a release of significant amounts of pollutants, and identifying specific preventive or remedial measures to be implemented.

iv. The PMP shall establish specific BMPs or other measures that ensure that the following specific requirements are met:

(a) Ensure proper management of solid and hazardous waste in accordance with regulations promulgated under the Resource Conservation and Recovery Act (RCRA). Management practices required under RCRA regulations must be referenced in the BMP plan.

(b) Reflect requirements for Spill Prevention, Control, and Countermeasure (SPCC) plans under CWA section 311 and 40 CFR Part 112 and may incorporate any part of such plans into the PMP by reference.

(c) Reflect requirements for stormwater control under CWA section 402(p) and the regulations at 40 CFR 122.26 and 122.44, and otherwise eliminate to the extent practicable, contamination of stormwater runoff.

e. **Documentation**. The Permittee shall maintain a copy of the PMP at the facility and must make the plan available to EPA upon request.

f. **PMP Modification**. The Permittee shall amend the PMP whenever there is a change in the facility or in the operation of the facility that materially increases the generation of pollutants or their release or potential release to the receiving waters. The Permittee shall also amend the plan, as appropriate, when plant operations covered by the PMP change. Any such changes to the PMP must be consistent with the objectives and specific requirements listed above. All changes in the PMP must be reported to EPA in writing.

g. **Modification for Ineffectiveness**. If at any time the PMP proves to be ineffective in achieving the general objective of preventing and minimizing the generation of pollutants and their release and potential release to the receiving waters and/or the specific requirements above, the permit and/or the PMP must be subject to modification to incorporate revised BMP requirements.

4. Stormwater Pollution Prevention Plan

The Permittee shall develop and implement a stormwater pollution prevention (SWPP). The permittee may submit an integrated SWPP and PMP that addresses the requirements of this section and Special Condition IV.B.3 – Preventive Maintenance Plan and Pollution Prevention.

a. A copy of the most recent version of the approved SWPP Plan/BMP Plan shall be maintained at the facility and shall be available upon request.

b. The SWPP Plan/BMP Plan shall be reviewed every five years and modified if necessary. A certification that the SWPP Plan/BMP Plan was reviewed shall be submitted not later than ninety (90) days after the EDP.

c. Whenever changes occur at the facility that materially increase the potential for releases of pollutants or when situations occur that reflect that the plan is inadequate, the SWPP Plan/BMP Plan shall be modified to include preventive measurements in order to address those situations.

d. If a modification of the SWPP Plan/BMP Plan is necessary, the permittee shall submit the modified SWPP Plan/BMP Plan to EQB for review and approval within ninety (90) days from the date when the Plan was revised or changes in the facility occurred. The modified SWPP Plan/BMP Plan shall be implemented within ninety (90) days after the EQB's approval.

e. The permittee shall comply at all times with the provisions, measures or practices included in the most recent version of the SWPP Plan/BMP Plan approved by EQB.

f. **Inspection Requirements:** At least once each calendar year, the Permittee must conduct a Comprehensive Site Compliance Inspection when a stormwater discharge is occurring. Include the following areas in all inspections: access roads and rail lines; grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; and septage or hauled waste receiving station. Routine facility inspections of all areas of the facility where materials or activities are exposed to stormwater, and of all stormwater control measures used must be conducted at least quarterly (i.e., once each calendar quarter), or more frequently (e.g., monthly), as appropriate.

g. **Control Measures:**

The permittee must consider the following when selecting and designing control measures:

i. preventing stormwater from coming into contact with polluting materials is generally more effective, and less costly, than trying to remove pollutants from stormwater;
ii. using control measures in combination is more effective than using control measures in isolation for minimizing pollutants in the stormwater discharge;
iii. assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit;
iv. minimizing impervious areas at the facility and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches) can reduce runoff and improve groundwater recharge and stream base flows in local streams, although care must be taken to avoid ground water contamination;
v. attenuating flow using open vegetated swales and natural depressions can reduce in-stream impacts of erosive flows;
vi. conserving and/or restoring of riparian buffers will help protect streams from stormwater runoff and improve water quality; and
vii. using treatment interceptors (e.g., swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

h. **Minimize Exposure.** The permittee must minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff by either locating these industrial materials and activities inside or protecting them with storm resistant coverings (although significant enlargement of impervious surface area is not recommended). In minimizing exposure, the permittee should pay particular attention to the following:

i. use grading, berming, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas;
ii. locate materials, equipment, and activities so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas);

iii. clean up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants;
iv. use drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible;
v. use spill/overflow protection equipment;
vi. drain fluids from equipment and vehicles prior to on-site storage or disposal;
vii. perform all cleaning operations indoors, under cover, or in bermed areas that prevent runoff and run-on and also that capture any overspray; and
viii. ensure that all washwater drains to a proper collection system (i.e., not the stormwater drainage system).

The discharge of vehicle and equipment washwater, including tank cleaning operations, is not authorized by this permit. These wastewaters must be covered under a separate NPDES permit, discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or disposed of otherwise in accordance with applicable law.

i. Good Housekeeping. The permittee must keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals, keeping materials orderly and labeled, and storing materials in appropriate containers.

j. Maintenance. The permittee must regularly inspect, test, maintain, and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater discharged to receiving waters. The permittee must maintain all control measures that are used to achieve the effluent limits required by this permit in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel appropriately trained). If control measures need to be replaced or repaired, the permittee must make the necessary repairs or modifications as expeditiously as practicable.

k. Spill Prevention and Response Procedures. The permittee must minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. At a minimum, the permittee must implement:

i. Procedures for plainly labeling containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides," etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;

ii. Preventative measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;

iii. Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of the stormwater pollution prevention team.

l. **Erosion and Sediment Controls.** The permittee must stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. The permittee must place flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants.

m. Management of Runoff. The permittee must divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff, to minimize pollutants in the discharge.

n. Employee Training. The permittee must train all employees who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities

necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of the Pollution Prevention Team. Training must cover both the specific control measures used to achieve the effluent limits in this Part, and monitoring, inspection, planning, reporting, and documentation requirements in other parts of this permit. EPA recommends training be conducted at least annually (or more often if employee turnover is high).

o. **Waste, Garbage and Floatable Debris.** The permittee must ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

p. **Dust Generation and Vehicle Tracking of Industrial Materials.** The permittee must minimize generation of dust and off-site tracking of raw, final, or waste materials.

5. Cooling Water Intake Structure Requirements

Before September 30, 2020, the permittee shall either confirm that EPA already has sufficient information, or submit the information required below related to source water physical data, cooling water intake structure data, source water baseline biological data, cooling water system data, a chosen method to comply with impingement requirements, entrainment performance studies, and operational status.

EPA notes that the permittee has already submitted substantial information on these focus areas, and may be in the process of collecting information on other areas. By September 30, 2016, the permittee shall submit an anticipated schedule of submittals for the items listed below. If the permittee is relying on previously submitted reports or data to address the items below, this must be clearly identified to the EPA in the anticipated schedule. The permitee may also supplement or update any of these previously submitted items.

Where appropriate, the permittee may consider consolidating quality assurance project plans, and information submittals amongst other similar power generating stations, provided that the information required is not facility-specific or waterbody-specific. This option is not available for facility and waterbody specific information requirements. The permittee shall indicate their intent to use this option in the anticipated schedule of submittals.

The 316(b) permit conditions and schedule of submittals contained within this permit are initial steps towards compliance with the 316(b) Existing Facility Rule. The permittee shall indicate the compliance alternative selected and the approach for complying with the regulations. Information collected during this permit term will be evaluated and included in subsequent permit renewals, when additional 316(b) permit conditions may be necessary. Alternatively, it may be necessary to reopen this permit to adopt appropriate revisions.

a. Source Water Physical Data

i. A narrative description and scaled drawings showing the physical configuration of all source water bodies used by the facility, including areal dimensions, depths, salinity and temperature regimes, and other documentation that supports a determination of the water body type where each cooling water intake structure is located;

ii. Identification and characterization of the source waterbody's hydrological and geomorphological features, as well as the methods used to conduct any physical studies to determine the intake area of influence within the waterbody and the results of such studies; and

iii. Locational maps.

b. Cooling Water Intake Structure Data.

The owner or operator of the facility must submit:

i. A narrative description of the design and configuration of each cooling water intake structure and where it is located in the water body and in the water column;

ii. Latitude and longitude in degrees, minutes, and seconds for each cooling water intake structure;

iii. A narrative description of the operation of each of cooling water intake structure, including design intake flows, daily hours of operation, number of days of the year in operation and seasonal changes, if applicable;

iv. A flow distribution and water balance diagram that includes all sources of water to the facility, recirculating flows, and discharges; and

v. Engineering drawings of the cooling water intake structure including the fish return.

c. Source Water Baseline Biological Characterization Data.

This information is required to characterize the biological community in the vicinity of the cooling water intake structure and to characterize the operation of the cooling water intake structures. This supporting information must include existing data (if they are available). However, the permittee may supplement the data using newly conducted field studies. Information already submitted may be cross referenced to the title and submittal date or resubmitted. The permittee must include:

i. A list of the data in paragraphs (ii) through (vi) of this section that are not available and efforts made to identify sources of the data;

ii. A list of species (or relevant taxa) for all life stages and their relative abundance in the vicinity of each cooling water intake structure;

iii. Identification of the species and life stages that would be most susceptible to impingement or entrainment. Species evaluated should include the forage base as well as those most important in terms of significance to commercial and recreational fisheries;

iv. Identification and evaluation of the primary period of reproduction, larval recruitment, and period of peak abundance for relevant taxa;

v. Data representative of the seasonal and daily activities (e.g., feeding and water column migration) of biological organisms in the vicinity of the cooling water intake structure;

vi. Identification of all threatened, endangered, and other protected species that might be susceptible to impingement or entrainment at cooling water intake structures. Identification of all threatened, endangered, and other protected species whose range of habitat or designated critical habitat includes the waters where the facility's intakes are located. The permittee must provide this information in (i) through (v) of this section. The permittee must coordinate with the appropriate US Fish and Wildlife Service and National Marine Fisheries Service office to determine what threatened or endangered species may be present;

vii. Documentation of any public participation or consultation with Federal or State agencies undertaken in development of the source water biological characterization for an existing facility; and

viii. Should the permittee supplement the information requested in paragraph (i) of this section with data collected using field studies, supporting documentation for the Source Water Baseline Biological Characterization must include a description of all methods and quality assurance procedures for

sampling and monitoring, and/or data analysis including a description of the study area; taxonomic identification of sampled and evaluated biological assemblages (including all life stages of fish and shellfish); and sampling and data analysis methods. The sampling, and/or data analysis methods must be appropriate for a quantitative survey and based on consideration of methods used in other biological studies performed within the same source water body. The study area should include, at a minimum, the area of influence of the cooling water intake structure.

ix. Identification of protective measures and stabilization activities that have been implemented, and a description of how these measures and activities affected the baseline water condition in the vicinity of the intake.

x. A list of fragile species, as defined [in Attachment A], at the facility. The permittee need only identify those species not already identified as fragile at [in Attachment A].

xi. If the intake is within the range of habitat of one or more federally listed threatened or endangered species, a certification that the information at 122.21(r)(4)(vi) was sent directly to the relevant regional offices of the U.S. Fish and Wildlife Service or National Marine Fisheries Service.

d. Cooling Water System Data.

The owner or operator of the facility must submit the following information for each cooling water intake structure used or intended to be used:

i. A narrative description of the operation of the cooling water system and its relationship to cooling water intake structures; the proportion of the design intake flow that is used in the system; the number of days of the year the cooling water system is in operation and seasonal changes in the operation of the system, if applicable; the proportion of design intake flow for contact cooling, non-contact cooling, and process uses; a distribution of water reuse to include cooling water reused as process water, process water reused for cooling, and the use of gray water for cooling; for existing facilities, a description of reductions in total water withdrawals including cooling water intake flow reductions already achieved through minimized process water withdrawals; a description of any cooling water that is used in a manufacturing process either before or after it is used for cooling, including other recycled process water flows; the proportion of the source waterbody withdrawn (on a monthly basis);

ii. Design and engineering calculations prepared by a qualified professional and supporting data to support the description required by paragraph (i) of this section; and

iii. Description of existing impingement and entrainment technologies or operational measures and a summary of their performance, including but not limited to reductions in impingement mortality and entrainment due to intake location and reductions in total water withdrawals and usage.

e. Chosen Method of Compliance with Impingement Mortality Standard.

By September 30, 2020, the permittee shall submit a Status Report indicating its progress toward choosing its preferred IM Standard compliance method under 40 CFR §125.94(c). If it has chosen a preferred method, predicated on an assumed entrainment compliance method, it must preliminarily document the basis of the selection and include:

i. Requested timeframe needed to install and optimize the IM compliance method during the upcoming permit renewal term, justifying why this requested time is "as soon as practical" as required by 40 CFR §125.94(b)(1); and

ii. Planned scope of work and requested timeframe to perform any of the required compliance monitoring during the permit renewal term, including the Impingement Technology Performance Optimization Study if the preliminarily chosen IM Standard compliance method includes either modified traveling screens (40 CFR 125.94(c)(5)) or a proposed alternative system of technologies (40 CFR 125.94(c)(6).

f. Impingement Technology Performance Optimization Study

The owner or operator that chooses to comply via 40 CFR 125.94 (c)(5) or (6) must also submit an *impingement technology performance optimization study* as described below:

i. If the permittee chooses to comply with 40 CFR 125.94(c)(5), the impingement technology performance optimization study must include two years of biological monitoring measuring the reduction in impingement mortality achieved by the modified traveling screens as defined at 40 CFR 125.92 and demonstrating that the operation has been optimized to minimize impingement mortality. The permittee must include a complete description of the traveling screens and associated equipment, including, for example, type of mesh, mesh slot size, pressure sprays and fish return mechanisms. The permittee must also provide a description of any monitoring and monitoring approach used in measuring impingement mortality, including:

(a) For this demonstration, the permittee must sample no less frequently than monthly. The Director may establish more frequent monitoring;
(b) Biological monitoring. Biological monitoring must be representative of the impingement and the impingement mortality at the intakes subject to this provision;
(c) A taxonomic identification to the lowest taxon possible of all organisms to be monitored;
(d) The method in which naturally moribund organisms are identified and taken into account;
(e) The method in which mortality due to holding times is taken into account;
(f) If the facility entraps fish or shellfish, the permittee must count the entrapment of organisms as impingement mortality;
(g) The percent impingement mortality reflecting optimized operation of the modified traveling screen and all supporting calculations.

ii. If the permittee chooses to comply with 40 CFR 125.94(c)(6), the impingement technology performance optimization study must include biological monitoring measuring the reduction in impingement mortality achieved by operation of the system of technologies, operational measures and best management practices and demonstrating that operation of the system has been optimized to minimize impingement mortality. This system of technologies, operational measures and best management practices may include flow reductions, seasonal operation, unit closure, credit for intake location, and behavioral deterrent systems. The permittee must document how each system element contributes to the system's performance. The permittee must include a minimum of two years of biological monitoring measuring the reduction in impingement mortality achieved by the system. The permittee must also include a description of any sampling or monitoring approach used in measuring the rate of impingement, impingement mortality, or flow reductions.

(a) *Rate of Impingement.* If the demonstration relies in part on a credit for reductions in the rate of impingement in the system, the permittee must provide an estimate of those reductions to be used as credit towards reducing impingement mortality, and any relevant supporting documentation, including previously conducted performance studies not already submitted to the Director as part of (7). The permittee must accompany studies more than 10 years old with an explanation of why the data is still relevant and representative of conditions at the facility and explain how the data should be interpreted using the definitions of impingement and entrapment at 40 CFR 125.92. The estimated reductions in

rate of impingement must be based on a comparison of the system to a once-through cooling system with a traveling screen whose point of withdrawal from the surface water source is located at the shoreline of the source waterbody. In addition, the permittee must include two years of biological monitoring demonstrating the rate of impingement resulting from the system. For this demonstration, the permittee must monitor no less frequently than monthly. The Director may establish more frequent monitoring.

(b) *Impingement Mortality.* If the demonstration relies in part on a credit for reductions in impingement mortality already obtained at the facility, the permittee must include two years of biological monitoring demonstrating the level of impingement mortality the system is capable of achieving. The permittee must provide a description of any sampling or monitoring approach used in measuring impingement mortality. In addition, for this demonstration the permittee must:

Monitor no less frequently than monthly. The Director may establish more frequent monitoring;

(1) Conduct biological monitoring that is representative of the impingement and the impingement mortality at an intake subject to this provision. In addition, the permittee must describe the location of the cooling water intake structure in the water body and the water column in relation to monitoring locations;
(2) Include a taxonomic identification to the lowest taxon possible of all organisms to be monitored;
(3) Describe the method in which naturally moribund organisms are identified and taken into account;
(4) Describe the method in which mortality due to holding times is taken into account; and
(5) If the facility entraps fish or shellfish, the permittee must count the entrapment of organisms as impingement mortality.

(c) *Flow reduction.* If the demonstration relies in part on flow reduction to reduce impingement, the permittee must include two years of intake flows, measured daily, as part of the demonstration, and describe the extent to which flow reductions are seasonal or intermittent. The permittee must document how the flow reduction results in reduced impingement. In addition, the permittee must describe how the reduction in impingement has reduced impingement mortality.

(d) *Total system performance.* The permittee must document the percent impingement mortality reflecting optimized operation of the total system of technologies, operational measures, and best management practices and all supporting calculations. Total system performance is the combination of the impingement mortality performance reflected in (A), (B), and (C) of this paragraph.

g. Entrainment Performance Studies.

The owner or operator of the facility must submit any previously conducted studies or studies obtained from other facilities addressing technology efficacy, through-plant entrainment survival, and other entrainment studies. Any such submittals must include a description of each study, together with underlying data, and a summary of any conclusions or results. Any studies conducted at other locations must include an explanation as to why the data from other locations are relevant and representative of conditions at the facility. If studies are more than 10 years old, the permittee must explain why the data is still relevant and representative of conditions at the facility.

h. Operational Status.

The owner or operator of the facility must submit a description of the operational status of each generating, production, or process unit, including but not limited to:

i. Descriptions of individual generating unit operating status including age of each unit, capacity utilization (or equivalent) for the previous 5 years (including any extended or unusual outages that significantly affect current data for flow, impingement, entrainment, or other factors, including identification of any operating unit with a capacity utilization of less than 8 percent for each of the previous 5 years and maintained solely to generate power for emergency purposes), and any major upgrades completed within the last 15 years, including but not limited to boiler replacement, condenser replacement, turbine replacement, or changes to fuel type;

ii. For processes other than power or steam generation, descriptions of individual production processes and product lines, operating status including age of each line, seasonal operation, including any extended or unusual outages that significantly affect current data for flow, impingement, entrainment, or other factors, any major upgrades completed within the last 15 years, and plans or schedules for decommissioning or replacement of process units or production processes and product lines; and

iii. Descriptions of plans or schedules for any new units planned within the next 5 years.

Before September 30, 2020, submit the information required below related to entrainment characterization.

i. Entrainment Characterization Study.

Develop for submission to the Director an *Entrainment Characterization Study* that includes a minimum of two years of entrainment monitoring. The Entrainment Characterization Study must include the following components:

(a) *Entrainment Monitoring Method.* Identification and documentation of the monitoring period and frequency. Identification and documentation of organisms monitored to the lowest taxon possible of all life stages of fish and shellfish that are in the vicinity of the cooling water intake structure(s) and are susceptible to entrainment, including any other organisms identified by the Director, and any species protected under Federal, State, or Tribal Law, including threatened or endangered species with a habitat range within the vicinity of the cooling water intake structure. Biological monitoring must be representative of the entrainment at the intakes subject to this provision. The owner or operator of the facility must identify and document how the location of the cooling water intake structure in the water body and the water column are accounted for by the monitoring locations;

(b) *Biological Entrainment Characterization.* Characterization of all life stages of fish, shellfish, and any species protected under Federal, State, or Tribal Law (including threatened or endangered species), including a description of their abundance and their temporal and spatial characteristics in the vicinity of the cooling water intake structure(s), based on sufficient data to characterize annual, seasonal, and diel variations in entrainment, including but not limited to variations related to climate and weather differences, spawning, feeding, and water column migration. This characterization may include historical data that are representative of the current operation of the facility and of biological conditions at the site. Identification of all life stages of fish and shellfish shall include identification of any surrogate species used, and identification of data representing both motile and non-motile life-stages of organisms;

(c) *Analysis and Supporting Documentation.* Documentation of the current entrainment of all life stages of fish, shellfish, and any species protected under Federal, State, or Tribal Law (including threatened or endangered species). The documentation may include historical data that are representative of the current operation of the facility and of biological conditions at the site. Entrainment monitoring to support the facility's calculations must be collected during periods of representative operational flows for the cooling water intake structure, and the flows associated with the monitoring must be documented. The method used to determine latent mortality along with data for specific organism mortality or survival that

is applied to other life-stages or species must be identified. The owner or operator of the facility must identify and document all assumptions and calculations used to determine the total entrainment and entrainment mortality for that facility together with all methods and quality assurance/quality control procedures for monitoring and data analysis. The proposed monitoring and data analysis methods must be appropriate for a quantitative survey.

j. Comprehensive Technical Feasibility and Cost Evaluation Study.

Before September 30, 2020, submit the information required below related to technical feasibility and cost, benefits, and non-water quality impacts. Develop for submission to the Director an engineering study of the technical feasibility and incremental costs of candidate entrainment control technologies. In addition, the study must include the following:

i. *Technical feasibility.* An evaluation of the technical feasibility of closed-cycle recirculating systems (cooling towers), fine mesh screens with a mesh size of 2mm or smaller, and water reuse or alternate sources of cooling water. In addition, this study must include:

(a) A description of all technologies and operational measures considered (including alternative designs of closed-cycle recirculating systems such as natural draft cooling towers, mechanical draft cooling towers, hybrid designs, and compact or multi-cell arrangements);

(b) A discussion of land availability, including an evaluation of adjacent land and acres potentially available due to generating unit retirements, production unit retirements, other buildings and equipment retirements, and potential for repurposing of areas devoted to ponds, coal piles, rail yards, transmission yards, and parking lots;

(c) A discussion of available sources of process water, grey water, waste water, reclaimed water, or other waters of appropriate quantity and quality for use as some or all of the cooling water needs of the facility; and

(d) Documentation of factors other than cost that may make a candidate technology impractical or infeasible for further evaluation.

ii. *Other entrainment control technologies.* An evaluation of additional technologies for reducing entrainment may be required by the Director.

iii. *Cost evaluations.* The study must include engineering cost estimates of all technologies considered in paragraphs (i) and (ii) of this section. Facility costs must also be adjusted to estimate social costs. All costs must be presented as the net present value (NPV) and the corresponding annual value. Costs must be clearly labeled as compliance costs or social costs. The permittee must separately discuss facility level compliance costs and social costs, and provide documentation for the following:

(a) Compliance costs are calculated as after-tax, while social costs are calculated as pre-tax. Compliance costs include the facility's administrative costs, including costs of permit application, while the social cost adjustment includes the Director's administrative costs. Any outages, downtime, or other impacts to facility net revenue, are included in compliance costs, while only that portion of lost net revenue that does not accrue to other producers can be included in social costs. Social costs must also be discounted using social discount rates of 3 percent and 7 percent. Assumptions regarding depreciation schedules, tax rates, interest rates, discount rates and related assumptions must be identified;

(b) Costs and explanation of any additional facility modifications necessary to support construction and operation of technologies considered in paragraphs (i) and (ii) of this section, including but

not limited to relocation of existing buildings or equipment, reinforcement or upgrading of existing equipment, and additional construction and operating permits. Assumptions regarding depreciation schedules, interest rates, discount rates, useful life of the technology considered, and any related assumptions must be identified; and

(c) Costs and explanation for addressing any non-water quality environmental and other impacts identified in paragraph IV.B.5.k. of this section. The cost evaluation must include a discussion of all reasonable attempts to mitigate each of these impacts.

k. Benefits Valuation Study.

Develop for submission to the Director an evaluation of the magnitude of benefits, both monetized and non-monetized, of the candidate entrainment reduction technologies and operational measures evaluated in paragraph IV.B.5.i and using the entrainment characterization study completed in IV.B.5.h of this section, including but not limited to:

i. Incremental changes in the numbers of fish and shellfish, for all life stages, lost due to impingement mortality and entrainment;
ii. Identification of basis for any monetized or qualitatively assessed values assigned to changes in commercial and recreational species, forage fish, and shellfish, and to any other ecosystem or non-use benefits;
iii. A discussion of prior mitigation efforts including how long they have been in effect and how effective they have been;
iv. Identification of other benefits to the environment and local communities, including but not limited to improvements for mammals, birds, and other organisms and aquatic habitats; and
v. Estimates of benefits resulting from any reductions in thermal discharges from entrainment technologies.

l. Non-water Quality Environmental and Other Impacts Study.

Develop for submission to the Director a detailed facility specific discussion of the changes in non-water quality environmental and other impacts attributed to each technology and operational measure considered in paragraph IV.B.5.i of this section, including both impacts increased and impacts decreased. The study must include the following:

i. Estimates of changes to energy consumption, including but not limited to auxiliary power consumption and turbine backpressure energy penalties;
ii. Estimates of air pollutant emissions and of the human health and environmental impacts associated with such emissions;
iii. Estimates of changes in noise;
iv. A discussion of impacts to safety, including documentation of the potential for plumes, icing, and availability of emergency cooling water;
v. A discussion of facility reliability, including but not limited to facility availability, production of steam, impacts to production based on process unit heating or cooling, and reliability due to cooling water availability;
vi. Significant changes in consumption of water, including a facility-specific comparison of the evaporative losses of both once-through cooling and closed-cycle recirculating systems, and documentation of impacts attributable to changes in water consumption;
vii. A discussion of all reasonable attempts to mitigate each of these factors.

o. Peer Review.

At the time of the submittal of items IV.B.5.j, IV.B.5.k, and IV.B.5.l above, the permittee must conduct an external peer review of these items. The permittee must select peer reviewers and notify the Director in advance of their identity and qualifications by March 31, 2019. The Director may disapprove of a peer reviewer or require additional peer reviewers within two months of receipt. If the Director does not dissaprove a peer reviewer in writing by this date, the proposed peer reviewer is deemed approved and permittee may proceed to have the peer review performed.

The Director may confer with the EPA, Federal, State and Tribal fish and wildlife management agencies with responsibility for fish and wildlife potentially affected by the cooling water intake structure, independent system operators, and state public utility regulatory agencies, to determine which peer review comments must be addressed. The permittee must provide an explanation for any significant reviewer comments not accepted. Peer reviewers must have appropriate qualifications and their names and credentials must be included in the peer review report.

6. Chemical and Material Usage

a. The permittee is permitted to use chemicals to control biofouling in the service cooling towers, or for fire protection foam, provided that they meet the following conditions:

b. The discharge shall not cause a violation of any permit limit or cause or contribute to an exceedance of any applicable water quality standard for the receiving water.

c. Notification to the EPA of the optimum product dosage necessary to ensure no deleterious effects to the effluent aquatic toxicity. PREPA shall also document that adequate process controls are in place to ensure that excessive levels of the chemical products are not subsequently discharged.

d. The testing or use of such chemicals and/or materials shall not cause a violation of any permit limit or cause or contribute to an exceedance of any applicable water quality standard for the receiving water.

e. At the time of the pilot test, the permittee shall take a grab sample of the effluent from the outfall to which the material or chemical discharges, and analyze for all parameters monitored as required by the NPDES permit in effect at the time of the pilot test. The analytical testing must be representative of the condition of the normal outfall discharge with the addition of the material or chemical being tested. The permittee shall report on the timing of the test and sample location in the report required under Item C.2.f of this condition.

f. The permittee shall perform an acute whole effluent toxicity (WET) test of the effluent sampled at the monitoring station where the chemical or material is discharged. The acute toxicity analysis shall be performed on a grab sample of the effluent containing the material or chemical. The pilot test shall be stopped if toxicity is observed in the sample. For the purposes of this test, an LC50 result of of ≤100% shall be considered an indicator of toxicity.

g. The permittee shall provide a report of the pilot test to the EPA within 30 days of completion of the test. The report shall include:

   i. The time, duration, amount and location of each dosage of chemical or material tested;

   ii. Documentation that adequate process controls were in place to ensure that excessive levels of the chemical or material were not subsequently discharged;

iii. The optimum product dosage necessary to ensure no deleterious effects to the effluent aquatic toxicity;

iv. Results of all analytical testing, including the testing of the discharge for parameters limited by this permit, as well as the results of the acute toxicity testing.

v. A description of future plans for use of the material or chemical tested.

vi. All reports shall be provided to the EPA within 30 days of the completion of the pilot test, to the following address:

CHIEF, CLEAN WATER REGULATORY BRANCH
U.S. EPA REGION 2
290 BROADWAY
NEW YORK, NEW YORK 10007

h. The permittee may consider the use of a tested chemical or material conditionally approved as of 60 days following the completion of a pilot test, provided that all permit limitations and conditions are met. The use of this chemical will be considered conditionally approved unless and until the EPA provides notification to the permittee that the use of the tested chemical or material will be prohibited or controlled due to potential to cause an exceedance of permit limitations or toxicity. The EPA reserves the right to prohibit the use of a chemical material at any time.

7. Fire Protection Foam

The permittee shall use best management practices to prevent the discharge of fire protection foam. The permittee shall, to the maximum extent practicable:

a. Utilize alternative fire fighting foam products that exhibit high biodegradability, and that do not contain flourosurfactants;

b. Conduct pilot tests in bermed areas away from storm drain inlets, drainage facilities or water bodies;

c. Configure the discharge area with a sump to allow collection and disposal of foam to the sanitary sewer system; and

d. Discharge foam waste to a sanitary sewer to the maximum extent practicable.

8. Requirement to Maintain Treatment Level

The permittee is required to maintain at least the same level of treatment as in the previous permit for the discharges from oufalls 001A, 001C, and 002.

9. Coastal Zone Management Consistency

This permit renewal action has been certified consistent with the State Coastal Zone Management Program by the Puerto Rico Planning Board in a Resolution dated August 3, 2015.

10. Reopener Clause for Endangered Species Protection

This permit may be modified or revoked and reissued based on the results of Endangered Species Act (ESA) Section 7 consultation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service. In addition to any other grounds specified herein, EPA may modify or revoke this permit if, upon completion of the endangered species consultation, the discharge may jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat.

11. Reopener Clause for Essential Fish Habitat Protection

This permit may be modified or revoked and reissued based on the results of coordination with National Marine Fisheries Service regarding essential fish habitats (EFH) pursuant to Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act.

12. Hydrostatic Test Water Requirements

All tanks being hydrostatically tested must complete the following procedure:

i. After construction or reconstruction of the tank, sandblasting (most common) or other technique will be used to clean the tank.

ii. A vacuum truck or other equipment will remove all residues from the tank prior to testing.

iii. The water source for the hydrostatic testing will be fresh (potable) water supplied by the Puerto Rico Aqueduct and Sewer Authority (PRASA) or other source of fresh water.

Permittee will follow ASTM hydrostatic test standard # E1003-95 or other valid procedure before the discharge. Oil and Grease analyses will be performed on the surface and the middle depth of the tank. Also, visual inspection will be performed after the test to look for oil sheen in the used hydrostatic test water. If oil sheen is observed, the discharge shall be stopped. Permittee will include a written report in the DMR- Addendum stating the date of each discharge. This test water can be discharged through Outfall 001A if the oil/grease analysis results are below 15.0 mg/L.

ATTACHMENT A: DEFINITIONS

Acute Toxicity Test means any toxicity test designed to determine the concentration in which a response to a stimulus, such as a total effluent, specific substance or combinations of these, has sufficient severity to induce an adverse effect on a group of test organisms during a period of 96 hours or less; even if said effect is not necessarily the death of the organisms.

Acute Toxicity Unit (TU_a) means the reciprocal of the effluent concentration that causes 50 percent of the organisms to die in an acute toxicity test or induce a response halfway between the base line and maximum as defined by the following equation:

$$TU_a = 100 / (LC_{50})$$

(The LC_{50} should be expressed in terms of the percent of effluent in the dilution water.)

Average Monthly Discharge Limitation (AML) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. [40 CFR 122.2]

Average Weekly Discharge Limitation (AWL) means the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week. [40 CFR 122.2]

Best Management Practices (BMP) means the most effective practicable means of preventing or reducing the amount of pollution generated by nonpoint and point sources to a level more compatible to the water quality goals, including, but not limited to, structural and non-structural controls and operating and maintenance procedures. [40 CFR 122.2]

Biosolids means non-hazardous sewage sludge, as defined in 40 CFR Part 503.9. Sewage sludge that is hazardous, as defined in 40 CFR Part 261, must be disposed of in accordance with Resource Conservation and Recovery Act.

Bypass means the intentional diversion of waste streams from any portion of a treatment facility as discussed in 13. Bypass of Attachment B of this permit. [40 CFR 122.41(m)]

Composite means a combination of individual (or continuously taken) samples obtained at regular intervals over the entire discharge day. The volume of each sample must be proportional to the discharge flow rate. For a continuous discharge, a minimum of 24 individual grab samples (at hourly intervals) must be collected and combined to constitute a 24-hour composite sample. For intermittent discharges of more than 4 hours duration, grab samples must be taken at a minimum of 30-minute intervals.

Chronic Toxicity Test means any toxicity test designed to determine the concentration in which a response to a stimulus, such as a total effluent, a specific substance, or combination of these, has sufficient severity to induce a long-term adverse effect on a group of test organisms. A chronic effect could be lethality, reduction of growth rate, reduction of reproduction rate, etc.

Chronic Toxicity Unit (TU_c) means the reciprocal of the effluent concentration that causes no observable effect on the test organisms by the end of the chronic exposure period obtained during a chronic toxicity test as defined by the following equation:

$$TU_c = 100 / NOEC$$

(The NOEC value should be expressed in terms of the percent of effluent in the dilution water.)

Critical Initial Dilution means the minimum dilution to be determined by means of the sue of a mathematical model to be approved by EQB, and according to the procedures described in the *Mixing Zone and Bioassay Guidelines*, approved by EQB.

Daily Discharge is defined as either (1) the total mass of the constituent discharged over the calendar day (12:00 a.m. through 11:59 p.m.) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass; or (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day. For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends. [40 CFR 122.2]

Director means the *Regional Administrator* or the *State Director*, as the context requires, or an authorized representative. Until Puerto Rico has an approved state program authorized by the EPA under 40 CFR Part 123, *Director* means the Regional Administrator. Following authorization, *Director* means the State Director. Even in such circumstances, the EPA may retain authority to take certain action (see, for example, 40 CFR 123.1(d), 45 *Federal Register* 14178, April 1, 1983, on the retention of jurisdiction over permits the EPA issued before program approval). If any condition of this permit requires the reporting of information or other actions to both the Regional Administrator and the State Director, regardless of who has permit issuing authority, the terms *Regional Administrator* and *State Director* will be used in place of *Director*. [40 CFR 122.2]

Discharge Monitoring Report (DMR) means the EPA uniform national form, including any subsequent additions, revisions, or modifications, for the reporting of self-monitoring results by the Permittee. [40 CFR 122.2]

Geometric Mean means the *n*th root of the product of *n* numbers.

Grab means an individual sample collected in less than 15 minutes.

ICIS means EPA's Integrated Compliance Information System that provides web access to enforcement and compliance assurance data to EPA and state agencies.

Inhibition Concentration 25 (IC_{25}) means a point estimate of the effluent concentration that would cause a 25-percent reduction in a non-lethal (e.g., reproduction, growth) or lethal (mortality) biological measurement.

Lethal Concentration (LC_{50}) means the concentration of effluent, specific substances or combination of these that is lethal to 50 percent of test organisms exposed during a specific period in a toxicity test.

Lowest Observable Effects Concentration (LOEC) means the lowest concentration of an effluent or toxicant that results in adverse effects on the test organisms. That is, where the values for the observed endpoints are statistically different from the control.

Maximum Daily Discharge Limitation (MDL) means the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median is the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (*n*)

is odd, the median = $X_{(n+1)/2}$. If *n* is even, the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the *n*/2 and *n*/2+1).

Minimum Level (ML) is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specified sample weights, volumes, and processing steps have been followed.

Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects on the overall water body.

Monthly means one day each month (the same day each month) and a normal operating day (e.g., the 2nd Tuesday of each month).

No Observed Effect Concentration (NOEC) means the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation.

Not Detected (ND) are those sample results less than the ML.

Regional Administrator means the Regional Administrator of EPA Region 2 or the authorized representative of the Regional Administrator.

Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

Toxic pollutant means any of the pollutants listed in 40 CFR 401.15 (45 *Federal Register* 44503, July 30, 1979) and any modification to that list in accordance with CWA section 307(a)(1). [40 CFR 122.2]

Toxicity Reduction Evaluation (TRE) is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of collecting data relevant to the toxicity, including additional toxicity testing, and evaluating facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

Total Maximum Daily Loads (TMDLs) are calculations of the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards. TMDLs are the sum of the individual wasteload allocations for point sources and load allocations for nonpoint sources and natural background. [40 CFR 130.2(i)]

Upset is an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation as discussed in 14. Upset of Attachment B of this permit. [40 CFR 122.41(n)]

Waters of Puerto Rico means all coastal waters, surface waters, estuarine waters, ground waters and wetland as defined in Puerto Rico Water Quality Standards Regulations, as amended.

Weekly means every seventh day (the same day of each week) and a normal operating day

ATTACHMENT B: STANDARD CONDITIONS

General Conditions language in this attachment for sections 1 through 14, and 17 is based on the *Code of Federal Regulations* (CFR) published on July 1, 2015. Reference to provisions in the *United States Code* (U.S.C.) is based on the date of permit issuance.

Table of Regulatory References for General Conditions

Section	Section Title	Reference
1.	Duty to comply	40 CFR 122.41(a)
2.	Duty to reapply	40 CFR 122.41(b)
3.	Need to halt or reduce not a defense	40 CFR 122.41(c)
4.	Duty to mitigate	40 CFR 122.41(d)
5.	Proper operation and maintenance	40 CFR 122.41(e)
6.	Permit actions	40 CFR 122.41(f)
7.	Property rights	40 CFR 122.41(g)
8.	Duty to provide information	40 CFR 122.41(h)
9.	Inspection and entry	40 CFR 122.41(i)
10.	Monitoring and records	40 CFR 122.41(j)
11.	Signatory requirements	40 CFR 122.41(k)
12.	Reporting requirements	40 CFR 122.41(l)
13.	Bypass	40 CFR 122.41(m)
14.	Upset	40 CFR 122.41(n)
15.	Removed substances	33 U.S.C. 1311
16.	Oil and hazardous substance liability	33 U.S.C. 1321
17.	Reopener clause for toxic effluent limitations	40 CFR 122.44(b)(1)
18.	State laws	33 U.S.C. 1370
19.	Availability of information	33 U.S.C. 1318
20.	Severability	33 U.S. C. 1251 *NOTE*

1. Duty to Comply [40 CFR 122.41(a)].
   a. The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
   b. The Permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
   c. The Clean Water Act provides that any person who violates sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Clean Water Act, is subject to a civil penalty not to exceed $25,000 per day for each violation ($37,500 as adjusted by 40 CFR Part 19).
   d. The Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402 of the Clean Water Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Clean Water Act, is subject to criminal penalties of not less than $2,500 nor more than $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation

of the Clean Water Act, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both.

e. The Clean Water Act provides that any person who knowingly violates sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Clean Water Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Clean Water Act, is subject to criminal penalties of not less than $5,000 nor more than $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation of the Clean Water Act, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both.

f. Any person who knowingly violates sections 301, 302, 303, 306, 307, 308, 318 or 405 of the Clean Water Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Clean Water Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. A person which is an organization, as defined at 33 U.S.C. 309(c)(3)(B)(iii), shall, upon conviction be subject to a fine of not more than $1,000,000. In the case of a second or subsequent conviction for a knowing endangerment violation of the Clean Water Act, the maximum punishment shall be doubled with respect to both fine and imprisonment.

g. Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Clean Water Act or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this chapter, shall upon conviction, be punished by a fine of not more than $10,000, or imprisonment for not more than 2 years, or both. In the case of a second or subsequent conviction, under this paragraph, punishment shall be by a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

h. Any person may be assessed an administrative penalty by the Administrator for violating sections 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation ($16,000 as adjusted by 40 CFR Part 19), with the maximum amount of any Class I penalty assessed not to exceed $25,000 ($37,500 as adjusted by 40 CFR Part 19). Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues ($16,000 as adjusted by 40 CFR Part 19), with the maximum amount of any Class II penalty not to exceed $125,000 ($177,500 as adjusted by 40 CFR Part 19).

2. Duty to Reapply [40 CFR 122.41(b)]. This permit and the authorization to discharge shall terminate on the expiration date indicated on the first page. In order to receive authorization to discharge after the expiration date of this permit, the Permittee shall apply for and obtain a new permit. If the permit issuing authority remains the EPA, the Permittee shall complete, sign, and submit an application to the Regional Administrator no later than 180 days before the expiration date.

3. Need to Halt or Reduce not a Defense [40 CFR 122.41(c)]. 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.

4. Duty to Mitigate [40 CFR 122.41(d)]. The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper operation and maintenance [40 CFR 122.41(e)]. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back up or auxiliary facilities or similar systems which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

6. Permit actions [40 CFR 122.41(f)]. This permit may be modified, revoked and reissued, or terminated during its term pursuant to 40 CFR Part 122, Subpart D. The filing of a request by the Permittee for a permit

modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. Property rights [40 CFR 122.41(g)]. This permit does not convey any property rights of any sort, or any exclusive privileges.

8. Duty to provide information [40 CFR 122.41(h)]. The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

9. Inspection and Entry [40 CFR 122.41(i)]. The Permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

   a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

   d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

10. Monitoring and records [40 CFR 122.41(j)].

   a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

   b. Except for records of monitoring information required by this permit related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement report or application. This period may be extended by request of the Director at any time.

   c. Records of monitoring information shall include:

      1) The date, exact place, and time of sampling or measurements;

      2) The individual(s) who performed the sampling or measurements;

      3) The date(s) analyses were performed;

      4) The individual(s) who performed the analyses;

      5) The analytical techniques or methods used; and

      6) The results of such analyses.

   d. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 and any subsequent changes to the methods contained therein unless another method is required under 40 CFR subchapters N or O.

   e. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both. [See U.S.C. 1319(c)(4)].

11. Signatory requirements [40 CFR 122.41(k)]. All applications, reports, or information submitted to the Director shall be signed and certified. (See 40 CFR 122.22)

    a. Applications. All permit applications shall be signed as follows:

        1) For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

            Note: The EPA does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 CFR 122.22(a)(1)(i). The EPA will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under 40 CFR 122.22(a)(1)(ii) rather than to specific individuals.

        2) For a partnership or sole proprietorship. By a general partner or the proprietor, respectively; or

        3) For a municipality, state, federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a federal agency includes: a) The chief executive officer of the agency, or b) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of the EPA).

    b. All reports required by permits, and other information requested by the Director shall be signed by a person described in paragraph 11.a of Part II.B, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

        1) The authorization is made in writing by a person described in paragraph 11.a;

        2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and,

        3) The written authorization is submitted to the Regional Administrator, U.S. Environmental Protection Agency, Region 2, 290 Broadway, New York, NY 10007-1866, Attention: Compliance Assistance Program Support Branch, and to EQB.

    c. Changes to authorization. If an authorization under paragraph 11.b of Part II.B is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph 11.b of Part II.B must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

    d. Certification. Any person signing a document under paragraph 11.a or 11.b of Part II.B shall make the following certification:

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

penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

e. The Clean Water Act provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by imprisonment for not more than 6 months per violation, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both. (See CWA section 309.c.4).

12. Reporting Requirements [40 CFR 122.41(l)].

a. Planned changes. The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b);

2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under paragraph 4.a of Part I.B (40 CFR 122.42(a)(1)); or

3) The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

b. Anticipated noncompliance. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

c. Transfers. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Clean Water Act. (See 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory.)

d. Monitoring reports. Monitoring results shall be reported at the intervals specified in Part III of this permit.

1) Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.

2) If the Permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.

3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

e. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

f. Twenty four hour reporting.

1) The Permittee shall report 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 to EPA Region 2, Caribbean Environmental Protection Division, at (787) 977-5870 and State Director. A written submission shall also be provided within 5 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 times, 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 reoccurrence of the noncompliance.

2) The following shall be included as information which must be reported within 24 hours under this paragraph.

a) Any unanticipated bypass (see 13 below) which exceeds any effluent limitation in the permit. [See 40 CFR 122.41(g)].

b) Any upset (see 14 below) which exceeds any effluent limitation in the permit.

c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. (See 40 CFR 122.44(g)).

3) The Director may waive the written report on a case by case basis for reports under paragraph 12.f.(2) of Part II.B if the oral report has been received within 24 hours.

g. Other noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs 12.d, e, and f of Part II.B, at the time the monitoring reports are submitted. The reports shall contain the information listed in paragraph 12.f of Part II.B.

h. Other information. Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

13. Bypass [40 CFR 122.41(m)].

a. Bypass not exceeding limitations. The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 13.b. and 13.c of Part II.B.

b. Notice.

1) Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

2) Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required in paragraph 12.f of Part II.B (24-hour notice).

c. Prohibition of bypass.

1) Bypass is prohibited, and the Director may take enforcement action against a Permittee for bypass, unless:

a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

b) 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

c) The Permittee submitted notices as required under paragraph 13.b of Part II.B.

2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 13.b.(1) of Part II.B.

14. Upset [40 CFR 122.41(n)].

a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph 14.(b) of Part II.B are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

b. Conditions necessary for a demonstration of upset. 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 paragraph 12.f.(2)(b) of Part II.B (24 hour notice); and

4) The Permittee complied with any remedial measures required under paragraph 4 of Part II.B (duty to mitigate).

c. Burden of proof. In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

15. Removed substances (33 U.S.C. 1311). Pursuant to section 301 of the Clean Water Act, solids, sludges, filter backwash or other pollutants removed in the course of treatment or control of wastewaters and/or the treatment of intake waters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters. The following data shall be reported together with the monitoring data required in paragraph 2 of Part I.B:

a. The sources of the materials to be disposed of;

b. The approximate volumes and weights;

c. The method by which they were removed and transported; and

d. Their final disposal locations.

16. Oil and hazardous substance liability (33 U.S.C. 1321). The imposition of responsibilities upon, or the institution of any legal action against the Permittee under CWA section 311 shall be in conformance with regulations promulgated pursuant to Section 311 to discharges from facilities with NPDES permits.

17. Reopener clause for toxic effluent limitations [40 CFR 122.44(B)(1)]. Other effluent limitations and standards under CWA sections 301, 302, 303, 307, 318 and 405. If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA section 307(a) for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in the permit, the Director shall institute proceedings under these regulations to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition. See also 40 CFR 122.41(a).

18. State laws (33 U.S.C. 1370). Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by CWA section 510. The issuance of this permit does not preempt any duty to obtain state or local assent required by law for the discharge.

19. Availability of information (33 U.S.C. 1318). (CWA section 308)

a. NPDES permits, effluent data, and information required by NPDES application forms provided by the Director under 40 CFR 122.21 (including information submitted on the forms themselves and any attachments used to supply information required by the forms) shall be available for public inspection at the offices of the Regional Administrator and State Director.

b. In addition to the information set forth in subsection a., any other information submitted to the EPA in accordance with the conditions of this permit shall be made available to the public without further notice unless a claim of business confidentiality is asserted at the time of submission in accordance with the procedures in 40 CFR Part 2 (Public Information).

c. If a claim of confidentiality is made for information other than that enumerated in subsection a., that information shall be treated in accordance with the procedures in 40 CFR Part 2. Only information determined to be confidential under those procedures shall not be made available by the EPA for public inspection.

20. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.