EcoEléctrica, L.P.

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

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
EcoEléctrica, L.P.
PERMIT No. PR0025984

This Fact Sheet sets forth the principle facts and technical rationale that serve as the legal basis for the requirements of the accompanying draft permit. The draft permit has been prepared in accordance with Clean Water Act (CWA) section 402 and its implementing regulations at Title 40 of the *Code of Federal Regulations* (CFR), Parts 122 through 124, and the final Water Quality Certificate (WQC) issued by the Puerto Rico Department of Natural and Environmental Resources (DNER) pursuant to CWA section 401 requirements.

Pursuant to 40 CFR 124.53, the Commonwealth of Puerto Rico must either grant a certification pursuant to CWA section 401 or waive this certification before the U.S. Environmental Protection Agency (EPA) may issue a final permit. On December 12, 2022, DNER provided in the WQC that the allowed discharge will not cause violations to the applicable water quality standards at the receiving water body if the limitations and monitoring requirements in the WQC are met. In accordance with CWA section 401, EPA has incorporated the conditions of the final WQC into the draft permit. The WQC conditions are discussed in this Fact Sheet and are no less stringent than allowed by federal requirements. Additional requirements might apply to comply with other sections of the CWA. Review and appeals of limitations and conditions attributable to the WQC were made through the applicable procedures of the Commonwealth of Puerto Rico and not through EPA procedures.

DNER issued a draft WQC for the facility on September 30, 2020. In a letter dated November 6, 2020 from Carlos A. Reyes, EcoEléctrica President & General Manager, to Ángel R. Meléndez Aguillar, DNER Water Quality Manager, EcoEléctrica submitted comments regarding sludge special conditions, and the effluent limitations for arsenic, residual chlorine, sulfide, and no net additions. DNER issued a final WQC on May 11, 2021. EcoEléctrica appealed the final WQC in a Request for Adjudicative Procedure according to Section 5.4 of the Uniform Procedures Law, dated June 2, 2021, in which the facility objected to the effluent limitation for residual chlorine, as provided in the final WQC (provided in Appendix E). After reviewing the hearing request and additional technical reports submitted by the facility, DNER issued a draft WQC for EcoEléctrica on October 6, 2020, and a final WQC on December 12, 2022. Permit conditions marked with an asterisk (*) are pursuant to the WQC.

PART I. BACKGROUND

A. Permittee and Facility Description

EcoEléctrica, L.P. (referred to throughout as the Permittee) has applied for renewal of its National Pollutant Discharge Elimination System (NPDES) permit. The Permittee is discharging pursuant to NPDES Permit No. PR0025984. The Permittee submitted Application Form 1 and Form 2C dated November 27, 2018 and applied for an NPDES permit to discharge treated wastewater from EcoEléctrica, Peñuelas, called the facility. The facility is classified as a major discharger by EPA in accordance with the EPA rating criteria.

The Permittee owns and operates a Liquefied Natural Gas (LNG) cogeneration power plant consisting of: a LNG marine unloading and storage terminal; a cogeneration plant with two combustion turbines; and, two heat recovery steam generators in line with a steam turbine, a desalination plant and an auxiliary diesel generator. Attachment A of this Fact Sheet provides a map of the area around the facility and a flow schematic of the facility.

The treatment system consists of the following: evaporation from cooling tower to remove heat from the wastewater, neutralization, oil/water separation, and addition of materials to produce potable water.

Certain solid wastes will be generated by the facility, including sewage from sewage holding tanks, waste oil from the oil/water separators, and chemical wastes from the neutralization tank. Any solid wastes generated by the

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Permittee must be hauled off-site by a licensed contractor and properly disposed. Disposal of these wastes to Outfall 001 is prohibited.

Summary of Permittee and Facility Information

Permittee	EcoEléctrica
Facility contact, title, phone	Eng. Oscar Cedeño, PE Environmental and Fuels Manager 787-836-2740 ext 292 or 787-487-6042
Permittee (mailing) address	641 Road 337 Firm Delivery Peñuelas, PR 00624
Facility (location) address	State Road 337, Km 3.7 Peñuelas, PR 00624
Type of facility	Electric Service – SIC Code 4911 Marine Cargo Handling – SIC Code 4491 Natural Gas Storage – SIC Code 4922 Water Supply – SIC Code 4941
Pretreatment program	N/A
Facility monthly average flow	8.97 MGD
Facility design flow	21.4 MGD
Facility classification	Major

B. Discharge Points and Receiving Water Information

Wastewater is discharged from Outfall 001 to the Guayanilla Bay (extension of the Caribbean Sea), a water of the United States, in the Southern Puerto Rico watershed.

The draft permit authorizes the discharge from the following discharge point(s):

Outfall	Effluent description	Outfall latitude	Outfall longitude	Receiving water name and classification
001	Cooling tower blowdown including: - Condenser cooling water blowdown - Heat recovery steam generator blowdown - Desalination plant brine blowdown - Rotary filters backwash - Remineralization filter backwash - Demineralizer wastewater - Laboratory drains - Wastewater from sample analysis - Waste from sample analysis equipment cleaning - Water from glassware cleaning - Tank and chemical container wash and cleaning wastewater - Chemical dike drains - Demineralization backwash - Streams from oils/water separators (that include treated streams from plant drains, equipment drain lines and remineralizer drains)	17.00°, 58.00', 13.00" N	-66.00°, 45.00', 59.00" W	Guayanilla Bay, Class SB

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As indicated in the Puerto Rico Water Quality Standards (PRWQS) Regulations, the designated uses for Class SB receiving waters include:

> Coastal waters and estuarine waters intended for use in primary and secondary contact recreation, and for propagation and maintenance of desirable species, including threatened or endangered species.

CWA section 303(d) requires the Commonwealth of Puerto Rico to develop a list of impaired waters, establish priority rankings for waters on the list, and develop TMDLs for those waters. The receiving water has been determined to have water quality impairments for one or more of the designated uses as determined by section 303(d) of the CWA. The Guayanilla Bay (PRSC38) is impaired for:

- Copper,
- Enterococcus,
- Oil and grease,
- Temperature,
- Mercury,
- Thallium, and
- Turbidity.

No total maximum daily loads (TMDLs) have been developed for the receiving water.

C. Mixing Zone/Dilution Allowance

A mixing zone or dilution allowance has not been authorized for the discharger.

D. Compliance Orders/Consent Decrees

The Permittee does not have any compliance orders or consent decrees that affect this permit action.

E. Summary of Basis for Effluent Limitations and Permit Conditions - General

The effluent limitations and permit conditions in the permit have been developed to ensure compliance with the following, as applicable:

- NPDES regulations (40 CFR Part 122)
- Puerto Rico Water Quality Standards (PRWQS), April 2019
- Steam Electric Power Generating Effluent Guidelines (40 CFR Part 423)

PART II. RATIONALE FOR EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

CWA section 301(b) and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable technology-based requirements where necessary to achieve applicable water quality standards. In addition, 40 CFR 122.44(d)(1)(i) requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that cause, have the reasonable potential to cause, or contribute to an exceedance of a water quality criterion, including a narrative criterion. The process for determining reasonable potential and calculating water quality-based effluent limits (WQBELs) is intended to protect the designated uses of the receiving water, and achieve applicable water quality criteria. Where reasonable potential has been established for a pollutant, but there is no numeric criterion for the pollutant, WQBELs must be established using (1) EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

The effluent limitations and permit conditions in the permit have been developed to ensure compliance with all federal and state regulations, including PRWQS. The basis for each limitation or condition is discussed below.

A. Effluent Limitations

The permit establishes Technology-based Effluent Limitations (TBELS) and Water Quality-based Effluent Limitations (WQBELs) for several pollutants and the basis for these limitations are discussed below.

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***Note**: Requirements marked with an asterisk (*) are based on the WQC.*

1. **Arsenic*:** A monitoring and reporting requirement has been established in the permit pursuant to the WQC. Based on an analysis of the data, the discharge does not have the reasonable potential to cause or contribute to an excursion above the WQS. There is no effluent limitation for arsenic.
2. **5-day Biochemical Oxygen Demand (BOD_5)*:** A monthly average effluent limitation of 30.0 mg/L for BOD_5 has been established in the permit pursuant to the WQC and Rule 1303.1(F) of the PRWQS.
3. **Free Available Chlorine:** A daily maximum effluent limitation of 0.5 mg/L and a monthly average effluent limitation of 0.2 mg/L have been established in the permit pursuant to 40 CFR Part 423.

   As per 40 CFR Part 423, neither free available nor total residual chlorine 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 the utility can demonstrate to the Regional Administrator that the units in a particular location cannot operate at or below this level or chlorination.
4. **Residual Chlorine*:** A daily maximum effluent limitation of 20 ug/L has been established in the permit pursuant to the WQC and Rule 1303.1(J)(1) of the PRWQS.

   Based on EPA's analysis of the DMR data, the discharge has the reasonable potential to cause or contribute to an excursion above the WQS. However, as noted in the interim WQC, dated October 6, 2022, the facility requested an alternate effluent limitation for residual chlorine. DNER reviewed the request and supporting data and determined that a daily maximum effluent limitation of 20 ug/L is sufficient to protect water quality.

   Additionally, 40 CFR Part 423 requires that neither free available nor total residual chlorine 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 the utility can demonstrate to the Regional Administrator that the units in a particular location cannot operate at or below this level or chlorination.
5. **Chromium, total:** A daily maximum effluent limitation 0.2 mg/L and a monthly average effluent limitation of 0.2 mg/L has been established in the permit pursuant to 40 CFR Part 423. Based on an analysis of the data, the discharge does not have the reasonable potential to cause or contribute to an excursion above the WQS.
6. **Color***. A narrative effluent limitation for color has been established in the permit pursuant to the WQC and Rule 1303.2 of the PRWQS. Based on an analysis of the data, the discharge has the reasonable potential to cause or contribute to an excursion above the WQS and therefore, a No Net Addition limit has been established in the permit, as provided by the WQC.
7. **Copper*:** A daily maximum effluent limitation of 3.73 ug/L has been established in the permit pursuant to the WQC and Rule 1303.1(J)(1) of the PRWQS. The copper TBEL in 40 CFR Part 423 does not apply as Outfall 001 does not contain metal cleaning waste. Based on an analysis of the data, the discharge has the reasonable potential to cause or contribute to an excursion above the WQS and therefore, a limit must be established in the permit. As provided by the WQC, a No Net Addition limit has also been established in the permit.
8. **Cyanide*:** A daily maximum effluent limitation of 1.0 ug/L has been established in the permit pursuant to the WQC and Rule 1303.1(J)(1) of the PRWQS. Based on an analysis of the data, the discharge has the reasonable potential to cause or contribute to an excursion above the WQS and therefore, a limit must be established in the permit. As provided by the WQC, a No Net Addition limit has also been established in the permit.

   The samples taken for the analysis of free cyanide shall be analyzed using the analytical method approved by EPA with the lowest detection level, in accordance with Rule 1306.8 of the PRWQS.
9. **Dissolved Oxygen*:** A monthly average effluent limitation of not less than 5.0 mg/L has been established in the permit pursuant to the WQC and Rule 1303.2(B)(2)(a) of the PRWQS.
10. **Flow*:** A daily maximum flow limitation of 81,007 m^3/day (21.4 MGD) has been established in the permit pursuant to the WQC.

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The flow measuring device for Outfall 001 shall be periodically calibrated and properly maintained. Calibration and maintenance records must be kept in compliance with Rule 1301 and Rule 1306 of the PRWQS and with the Environmental Public Policy Act of September 22, 2004, Act No. 416.

11. **Iron.** The iron limit in 40 CFR Part 423 does not apply as Outfall 001 does not contain metal cleaning waste. No iron limits have been established in the permit.

12. **Mercury*.** A daily maximum effluent limit of 0.051 ug/L has been established in the permit pursuant to the WQC and Rule 1303.1(J)(1) of the PRWQS. Based on an analysis of the data, the discharge has the reasonable potential to cause or contribute to an excursion above the WQS and therefore, a limit must be established in the permit. As provided by the WQC, a No Net Addition limit has also been established in the permit.

13. **Oil and Grease.** A daily maximum effluent limitation of 20.0 mg/L and a 30-day average effluent limitation of 15.0 mg/L has been established in the permit pursuant to 40 CFR Part 423.

14. **pH*:** A effluent limit of between 7.3 and 8.5 SU has been established in the permit pursuant to the WQC and Rule 1303.2(B)(2)(d) of the PRWQS. Based on an analysis of the data, the discharge has the reasonable potential to cause or contribute to an excursion above the WQS and therefore, a limit must be established in the permit.

15. **Polychlorinated biphenyl compounds (PCBs):** The PCB limit in 40 CFR Part 423 does not apply EcoElectrica does not have PCB containing equipment of any kind. Specifically, the electrical transformers located at the facility operate using mineral oil. No PCB limits have been established in the permit.

16. **Suspended, Colloidal and Settleable Solids*.** A narrative effluent limitation for color has been established in the permit pursuant to the WQC and Rule 1303.1 of the PRWQS.

17. **Sulfides:** Based on EPA R2's Reasonable Potential Tool analysis of the data, the discharge has the reasonable potential to cause or contribute to an excursion above the WQS. However, a closer look at the data shows that all results are non-detects or are below the method detection level. R2's RP Tool cannot properly analyze non-detects and will provide a false positive RP result. No effluent limit is required in the permit but monitoring is required.

18. **Surfactants.** Based on an analysis of the data, the discharge does not have the reasonable potential to cause or contribute to an excursion above the WQS and therefore, no limit is established in the permit.

19. **Temperature*:** Rule 1301.1 of the PRWQS states that, except by natural phenomena, no heat which would cause the temperature of any site to exceed 86°F or 30°C, may be added to the waters of Puerto Rico. The *Analysis of the Section 316 Thermal Discharge Application for the EcoElectrica Liquid Natural Gas Import Terminal and Cogeneration Project Penuelas, Puerto Rico and Ocean Discharge Criteria Section 403(c) Recommendation*, dated October 1996, provided initial modeling that indicated an average dilution ratio of 22:1 and that the discharge met the WQS at the time of 90°F. However, further biological monitoring conducted from 2000 to 2005 and three plume field surveys (May 2000, October 2002, and April 2004) indicated that the dilution is actually far greater. Data shows that there is no statistically significant difference when the discharge is compared to open water of Guayanilla Bay, both in salinity and temperature (2005 BMPP). In terms of dilution, this means that the discharge loses its integrity the moment it comes in contact with the receiving water. There is immediate and infinite dilution of the discharge.

    The *Technical Support Document Request for Effluent Limitation of Temperature*, dated January 29, 2020, provides data which shows that the existing effluent discharge from EcoElectrica does not cause the receiving water to exceed applicable standards, is not injurious to aquatic life or the culture of propagation of a balanced indigenous population (BIP) in Guayanilla Bay, and does not affect the designated uses of the receiving water body.

    As there is immediate and infinite dilution and that the discharge does not cause an exceedance of WQS, injure aquatic life or a BIP, or affect the designated uses of the water body, EPA has determined that there is no reasonable potential for temperature (The RP analysis provided in the appendix does not consider dilution/mixing and erroneously indicates RP for temperature).

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However, as required by the WQC, an effluent limit requiring that the temperature shall not exceed 90°F (33.2°C) (or shall not exceed the intake water by more than 1.8°F (1°C)) has been established in the permit.

In a letter to PR DNER dated January 30, 2020, the Permittee requested an alternate limit for temperature for Outfall 001 based on a technical support document that included a Water Quality Monitoring Program Temperature Data Assessment, Thermal Plume Study, and Biological Monitoring Studies. As such, an effluent limit stating that the temperature shall not exceed 90°F (33.2°C) (or shall not exceed the intake water by more than 1.8°F (1°C)) has been established in the permit pursuant to the WQC.

20. **Temperature Difference between Intake Water and the Discharge*:** As discussed for temperature above, there is no reasonable potential for temperature. An effluent limitation for the temperature difference between the intake water and the discharge has been established in the permit pursuant to the WQC. The Permittee is required to comply with the temperature effluent limitation OR the temperature difference effluent limitation.

21. **Total Suspended Solids*:** A daily maximum effluent limitation of 100.0 mg/L and a 30-day average effluent limitation of 30.0 mg/L has been established in the permit pursuant to 40 CFR Part 423. Based on an analysis of the data, the discharge has the reasonable potential to cause or contribute to an excursion above the WQS and therefore, a limit must be established in the permit. As provided by the WQC, a No Net Addition limit has also been established in the permit.

22. **Turbidity*.** A daily maximum effluent limitation of 10 NTU has been established in the permit pursuant to the WQC and Rule1303.2 of the PRWQS. Based on an analysis of the data, the discharge does not have the reasonable potential to cause or contribute to an excursion above the WQS. As provided by the WQC, a No Net Addition limit has also been established in the permit.

23. **Whole Effluent Toxicity*.** CWA section 101(a) establishes a national policy of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters. Specifically, CWA section 101(a)(3) and PRWQS Rule 1303(I) prohibit the discharge of toxic pollutants in toxic amounts. Federal regulations at 40 CFR 122.44(d) also require that where the permitting authority determines, through the analysis of site-specific WET data, that a discharge causes, shows a reasonable potential to cause, or contributes to an excursion above a water quality standard, including a narrative water quality criterion, the permitting authority must establish effluent limits for WET. To satisfy the requirements of the CWA, its implementing regulations, and the PRWQS, a reasonable potential analysis for WET was conducted for this discharge.

    PRWQS do not provide a numeric criterion for toxicity. Therefore, consistent with the recommendations of section 2.3.3 of EPA's *Technical Support Document (TSD) for Water Quality-Based Toxics Control* (EPA-505-2-90-001), values of 0.3 acute toxic unit (TU_a) and 1.0 chronic toxic unit (TU_c) were used to interpret the narrative water quality criteria for WET established in PRWQS Rule 1303(I). No numeric effluent limitations for WET have been established in the permit. However, the facility may be required to conduct semi-annual acute toxicity tests for a period of 1 year, after which tests shall be performed annually. Based on the results, EPA or PR DNER can require additional toxicity tests, including chronic tests and toxicity/treatability studies, and may impose toxicity limitations.

    In addition, the permit establishes a requirement for the Permittee to conduct accelerated testing a develop a Toxicity Reduction Evaluation (TRE) Workplan as Special Conditions. These requirements are necessary to ensure that the Permittee has a process for addressing effluent toxicity if toxicity is observed.

24. **Zinc*:** A daily maximum effluent limitation of 81.0 ug/L has been established in the permit pursuant EPA's Antibacksliding regulations. Pursuant to the WQC and Rule 1303.1 of the PRWQS, a daily maximum effluent limitation of 85.62 ug/l is sufficient to meet water quality standards but the antibacksliding regulations require that the existing, more-stringent effluent limit of 8.10 ug/l be maintained in the permit. Based on an analysis of the data, the discharge does not have the reasonable potential to cause or contribute to an excursion above the WQS. As provided by the WQC, a No Net Addition limit has also been established in the permit.

25. **126 Priority Pollutants.** An effluent limitation prohibiting detectable amounts of any of the 126 priority pollutants has been established in the permit pursuant to 40 CFR Part 423.

B. Effluent Limitations Summary Table

1. **Outfall Number 001**

Parameter	Units	Effluent limitations					
		Averaging period	Highest Reported Value ♠	Existing limits	Interim limits	Final limits	Basis
Arsenic* (As)	ug/L	Daily maximum	9.0	M/R	--	M/R	WQBEL
BOD_5*	mg/L	Monthly average	7.1	30.0	--	30.0	WQBEL
Free Available Chlorine	mg/L	Maximum Average	-- --	-- --	-- --	0.5 0.2	TBEL
Residual Chlorine*	ug/L	Maximum	90	200	--	20	WQBEL
Chromium, total	mg/L	Daily maximum Monthly average	0.04	0.2 0.2	--	0.2 0.2	TBEL
Color*	Pt-Co	Daily maximum	15	Shall not be altered except by natural causes	--	Shall not be altered except by natural causes	WQBEL
Copper*	ug/L	Daily maximum	3.1	3.73	--	3.73	WQBEL
Cyanide*	ug/L	Daily maximum	5.0	1.0	--	1.0	WQBEL
Dissolved Oxygen*	mg/L	Monthly average	4.6 (minimum reported value)	Shall not be less than 4.0	--	Shall not be less than 5.0	WQBEL
Flow*	m^3/day MGD	Daily maximum	-- 19.62	81,007 21.4	-- --	81,007 21.4	WQBEL
Mercury (Hg) *	ug/L	Daily maximum	0.05	0.051	--	0.051	WQBEL
Oil and Grease	mg/L	Daily maximum Monthly average	12.0 --	20.0 15.0	-- --	20.0 15.0	TBEL
pH*	SU	Monthly average	9.17 (max) 8.22 (min)	Within the range of 7.3 and 8.5	--	Will lie between 7.3 and 8.5, except when altered by natural phenomena	WQBEL
Sulfides	ug/L	Daily maximum	4.0	M/R	--	--	no limit
Surfactants (as MBAS)	ug/L	Daily maximum	42	M/R	--	--	no limit
Temperature*	°F °C	Instantaneous	-- 33.1	90.0 32.2	--	90.0 32.2	WQBEL
Temperature Difference between Intake Water and the Discharge*	°F °C	Instantaneous	-- --	-- --	-- --	1.8 1	WQBEL
Total Suspended Solids	mg/L	Daily maximum Monthly average	101.0 52.4	100.0 30.0	-- --	100.0 30.0	TBEL
Turbidity*	NTU	Daily maximum	5.68	10.0	--	10.0	WQBEL

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Parameter	Units	Effluent limitations					
		Averaging period	Highest Reported Value ♠	Existing limits	Interim limits	Final limits	Basis
Whole Effluent Toxicity, Acute*	TUa (minimum %LC50)	Daily maximum	>100%LC50 (minimum reported value)	--	--	--	WQBEL
Zinc*	ug/L	Daily maximum	44.0	81.0	--	81.0	WQBEL
126 Priority Pollutants	--	--	--	No detectable amounts	--	No detectable amounts	TBEL

Notes, Footnotes and Abbreviations

♠ - Wastewater data from DMRs dated December 20, 2017 to December 20, 2022.
Dashes (--) indicate there are no effluent data, no limitations, or no monitoring requirements for this parameter.
M/R indicates that monitoring and reporting is required.

2. **Outfall Number 001 Narrative Limitations**

See Part III.B.1 for additional narrative conditions from the Water Quality Certificate.

C. Monitoring Requirements

NPDES regulations at 40 CFR 122.48 require that all permits specify requirements for recording and reporting monitoring results. The Part III of the Permit establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements for this facility.

1. **Influent Monitoring Requirements**

   Influent monitoring is required for temperature in order to determine the change in temperature between the intake water and the discharge.

2. **Effluent Monitoring Requirements**

   Effluent monitoring frequency and sample type have been established in accordance with the requirements of 40 CFR 122.44(i) and recommendations in EPA's TSD. Consistent with 40 CFR Part 136 monitoring data for toxic metals must be expressed as total recoverable metal. Effluent monitoring and analyses shall be conducted in accordance with EPA test procedures approved under 40 CFR Part 136, Guidelines for Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, as amended. For situation where there may be interference, refer to Solutions to Analytical Chemistry Problems with Clean Water Act Methods (EPA 821-R-07-002). 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 licensed medical technologist authorized to practice the profession in Puerto Rico.

D. Compliance with Federal Anti-Backsliding Requirements and Puerto Rico's Anti-Degradation Policy

Federal regulations at 40 CFR 131.12 require that state water quality standards include an anti-degradation policy consistent with the federal policy. The discharge is consistent with the anti-degradation provision of 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, CWA sections 402(o)(2) and 303(d)(4) and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. Further, the Region 2 Antibacksliding Policy provides guidance regarding relaxation of effluent limitations based on water quality for Puerto Rico NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit with some exceptions where limitations may be relaxed. All effluent limitations in the permit are at least as stringent as the effluent limitations in the existing permit.

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PART III. RATIONALE FOR STANDARD AND SPECIAL CONDITIONS

A. Standard Conditions

In accordance with 40 CFR 122.41, standard conditions that apply to all NPDES permits have been incorporated by reference in Part IV.A.1 of the permit and expressly in Attachment B of the permit. The Permittee must comply with all standard conditions and with those additional conditions that are applicable to specified categories of permits under 40 CFR 122.42 and specified in Part IV.A.2 of the Permit.

B. Special Conditions

In accordance with 40 CFR 122.42 and other regulations cited below, special conditions have been incorporated into the permit. This section addresses the justification for special studies, additional monitoring requirements, Best Management Practices, Compliance Schedules, and/or special provisions for POTWs as needed. The special conditions for this facility are as follows:

1. **Preventative Maintenance Plans**

   In accordance with 40 CFR 122.2 and 122.44(k), Best Management Practices (BMPs) are schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution to waters of the United States. The Permittee is required to develop a Preventative Maintenance Plan in Part IV.B.3.a of the permit to control or abate the discharge of pollutants.

2. **Compliance Schedules**

   A compliance schedule has not been authorized for any pollutant or parameter in the permit on the basis of 40 CFR 122.47.

3. **Clean Water Act Section 316(b)**

   It is EPA's Best Professional Judgement (BPJ) that the Permittee has demonstrated that entrainment and impingement impacts at the facility are minimal. The existing location, design, construction, and cooling water intake structure reflect the best available technology for minimizing adverse impacts, and as such are in compliance with CWA Section 316(b).

   The Cooling Water Intake Structure includes a passive filtration system consisting of 2 mm (0.079") slot opening screens, with 53% open area. There is an air backwash system for remote cleaning of the screens. The design intake velocity of the cooling water intake structure is 0.5 feet per second. The facility also utilizes a closed cycle cooling system, which keeps the intake flow below the permit limit of 21.4 MGD.

   EPA Region 2 has made a final determination that the best technology available for minimizing adverse environmental impact due to impingement or entrainment at the cooling water intake structure is the continued operation of the existing screen technology, closed cycle cooling system, and design intake flow described above. These technologies comply with the EPA 2014 Final Rulemaking for Cooling Water Intake Structures at Existing Electric Generating Plants and Factories.

C. Special Conditions from the Water Quality Certificate

In accordance with CWA Section 401, the conditions from the WQC have been incorporated into the permit. The special conditions from the WQC are as follows:

1. *Flow*.
   a. The flow of discharge 001 must not exceed the limitation of 81,007 m^3/day (21.4 MGD) as the daily maximum. No increase in flow of discharge 001 shall be authorized without recertification from the Department of Natural and Environmental Resources (DNER).
   b. The flow measuring device for the Outfall 001 must be periodically calibrated and properly maintained. Calibration and maintenance records must be kept in compliance with the Applicable Rules and Regulations.
2. *Temperature.* 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. No thermal discharge or combination of thermal discharges into or onto the surface, estuarine and coastal waters shall be injurious to fish, shellfish or the

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culture or propagation of a balanced indigenous population thereof nor in any way affect the designated uses.

3. *No Net Addition Limitations*

    a. If the applicable water quality standard is not exceeded in the inlet, the established effluent limitation shall not be exceeded at the discharge point.

    b. If the applicable water quality standard is not achieved in the inlet, the same measurement shall be achieved at the discharge point.

    c. In order to demonstrate compliance with the No Net Addition Limitation, influent (raw water from Guayanilla Bay) and effluent (filters backwash and sedimentation tank drain) monitoring must be conducted at the frequency specified herein. The permittee shall take into consideration the residence time of the influent when screening influent and effluent monitoring. The permittee shall report the results of these measurements in the Discharge Monitoring Reports. Alternatively, the permittee may forgo influent monitoring and comply with the applicable water quality standard as effluent limitation at the end of the pipe of discharge.

4. *Color.* Shall not be altered by other than natural causes.

5. *Oil & Grease.* The water of Puerto Rico shall be substantially free from floating non-petroleum oils and greases, as well as petroleum-derived oils and greases.

6. *Suspended, Colloidal and Settleable Solids.* Solids from wastewater sources shall not cause deposition in or be deleterious to the existing or designated uses of the water body.

7. *Oil Sheen.* The discharge 001 must not cause the presence of oil sheen in the receiving water body.

8. *Floating Debris, Scum, or Other Floating Materials.* The waters of Puerto Rico must 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.

9. *Taste & Odor Production Substances.* Taste and odor-producing substances must not be present in amounts that will interfere with primary contact recreation or will render any undesirable taste or odor to edible aquatic life.

10. *Toxic or Undesirable Physiological Responses.* The waters of Puerto Rico must 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.

11. *Toxic Substances* 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 NPDES permit, must not exceed the concentrations specified in the applicable regulatory limitations.

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

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

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

15. The sampling point for discharge 001 shall be labeled with an 18 inches per 12 inches (minimum dimensions) sign that reads as follows:

    "Punto de Muestreo para la Descarga 001"

16. All water and wastewater treatment facilities, whether publicly or privately owned, must be operated by a person licensed by the Examination Board of Water and Wastewater Treatment Plants Operators of Puerto Rico.

17. *Whole Effluent Toxicity.* No later than one hundred eighty (180) days after the Effective Date of this Special Condition (EDSC), the permittee shall conduct semiannually acute toxicity tests for a period of

EcoEléctrica, L.P.

one (1) year, after which the tests shall be performed annually, of its wastewater discharge through outfall serial number 001 in accordance with the following:

a. The test species should be silverside (Menidia beryllina) and mysid (Mysidopsis bahia). The tests should be static renewal type.

b. The toxicity tests shall be conducted in accordance with the EPA publication, EPA 821-R-02-012 Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (Fifth Edition), October 2002, or the most recent edition of this publication if such edition is available.

c. The tests shall provide a measure of the acute toxicity as determined by the wastewater concentration, which cause 50 percent mortality of the test organisms over a 48-hour period. The test results shall be expressed in terms of Lethal Concentration (LC) and reported as 48-hour LC_{50}.

d. A procedure procedure report shall be submitted within ninety (90) days after the EDSC. The following information shall be included in the procedure report:

   i. An identification of the organization responsible for conducting the tests and the species to be tested.

   ii. A detailed description of the methodology to be utilized in the conduct of the tests, including equipment, sample collection, dilution water and source of test organisms.

   iii. A schematic diagram, which depicts the effluent sampling location in relation to the wastewater treatment facility and the discharge monitoring point.

e. The results of the tests conducted shall be submitted to the Clean Water Regulatory Branch, Water Division of EPA's Region 2 and the DNER's Water Quality Area, within sixty (60) days of completion of each test. Based on the review of the test results, the Regional Administrator of EPA or the DNER can require additional toxicity tests, including chronic and toxicity/treatability studies, and may impose toxicity limitation.

18. *Solid Waste Requirements.*

a. Disposed in compliance with the applicable requirements established in the 40 CFR Part 257. A report must be submitted to DNER and EPA notifying the method or methods used to dispose the solid wastes generated in the facility in a term no later than thirty (30) days after such solids are generated. Also, a copy of the approval or permit applicable to the disposal method used must be submitted, if any.

b. 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 must notify the Point Sources Permits Division of DNER's Water Quality Area in writing within a term no longer than twenty-four (24) hours after the spill to the following electronic address: bypass@drna.pr.gov. This notification shall include the following information: spilled material, spilled volume, and measures taken to prevent the spilled 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 DNER's Land Pollution Control Area and other state and federal agencies, if any.

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

   i. Description of removed material, date of removal, and source of material;

   ii. Approximate volume and weight of material;

   iii. Method by which material was removed and transported;

   iv. Final disposal and location of material;

   v. Name, title and affiliation of person that performs the service;

   A copy of the Non-Hazardous Solid Wastes Collection and Transportation Service Permit issued by the authorized official from DNER must be attached to the log book. The material removal log book must remain on-site and be available to DNER and EPA at all times.

EcoEléctrica, L.P.

PART IV. COMPLIANCE WITH APPLICABLE PROVISIONS OF OTHER FEDERAL LAWS OR EXECUTIVE ORDERS

A. Coastal Zone Management Act

Under 40 CFR 122.49(d), and in accordance with the Coastal Zone Management Act of 1972, as amended, 16 *United States Code* (U.S.C.) 1451 *et seq*. section 307(c) of the act and its implementing regulations (15 CFR Part 930), EPA may not issue an NPDES permit that affects land or water use in the coastal zone until the Permittee certifies that the proposed activity complies with the Coastal Zone Management Program in Puerto Rico, and that the discharge is certified by the Commonwealth of Puerto Rico to be consistent with the Commonwealth's Coastal Zone Management Program. The Puerto Rico Planning Board issued a determination, dated December 16, 1996, that the discharge is consistent with the Puerto Rico Coastal Management Program. As this activity has been permitted in the a past, a reopener clause has been established that allows the permit to be modified or revoked based on the consistency determination requested by the Permittee as part of this renewal process. The permittee submitted the request for consistency determination in a letter to the Puerto Rico Planning Board dated June 5, 2023.

B. Endangered Species Act

Under 40 CFR 122.49(c), EPA is required pursuant to section 7 of the Endangered Species Act (ESA), 16 U.S.C. 1531 *et seq*. and its implementing regulations (50 CFR Part 402) to ensure, in consultation with the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) that the discharge authorized by the permit is not likely to jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat.

The ESA requires the Regional Administrator to ensure, in consultation with the Secretary of the Interior or Commerce, that any action authorized by EPA is not likely to jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat.

EPA initiated consultation with USFWS regarding this permit action on June 1, 2023. USFWS expressed concerns in a letter dated June 1, 2023. EPA provided additional information and supporting technical documentation to USFWS on November 2, 2023. In a letter signed on December 5, 2023, USFWS stated:

> *"We have reviewed the information provided by EPA and our files and concur with your determination that the proposed action may affect, but is not likely to adversely affect, the above referenced species. In view of this, we believe that requirements of section 7 of the Endangered Species Act (Act) have been satisfied."*

EPA initiated consultation with NMFS regarding this permit action on December 21, 2024, and submitted additional information requested by NMFS on January 25, 2024. In a letter dated April 8, 2024, NMFS stated:

> *"Based on this analysis, NMFS concurs with EPA that the effects of the proposed action are not likely to adversely affect the North Atlantic DPS and South Atlantic DPS of green, loggerhead, or hawksbill sea turtles; Central and Southwest Atlantic DPS of scalloped hammerhead sharks; oceanic whitetip sharks; giant manta rays; Nassau grouper; elkhorn, staghorn, pillar, rough cactus, lobed star, mountainous star, or boulder star corals; queen conch; or blue, fin, sei, or sperm whales. The action is not likely to adversely affect designated critical habitat for elkhorn, and staghorn coral staghorn and for pillar, rough cactus, lobed star, mountainous star, or boulder star corals. Further, the action will not affect ESA-listed whales or leatherback sea turtles."*

C. National Historic Preservation Act

Under 40 CFR 122.49(b), EPA is required to assess the impact of the discharge authorized by the permit on any properties listed or eligible for listing in the National Register of Historic Places (NRHP) and mitigate any adverse effects when necessary in accordance with the National Historic Preservation Act, 16 U.S.C. 470 et seq. EPA's analysis indicates that no soil disturbing or construction-related activities are being authorized by approval of this permit; accordingly, adverse effects to resources on or eligible for inclusion in the NHRP are not anticipated as part of this permitted action.

D. Magnuson-Stevens Fishery Conservation and Management Act

Under 40 CFR 122.49, EPA is required to ensure that the discharge authorized by the permit will not adversely affect Essential Fish Habitat (EFH) as specified in section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), 16 U.S.C. 1801 *et seq*. EPA initiated consultation with the

EcoEléctrica, L.P.

National Marine Fisheries Service regarding this permit action on July 11, 2024. On August 12, 2024, NMFS provided notice to EPA stating, "NMFS agrees with EPA that continued operation of the EcoEléctrica cooling water system in the manner described in the permit is unlikely to have significant adverse effects on EFH." NMFS did not provide any EFH conservation recommendations under the Magnuson-Steven Act for the new permit.

E. Clean Water Act, Section 403 Ocean Discharge Criteria

CWA Section 403 requires EPA to consider guidelines for determining potential degradation of the marine environment when issuing NPDES permits. These Ocean Discharge Criteria (40 CFR 125, Subpart M) are intended to "prevent unreasonable degradation of the marine environment and to authorize imposition of effluent limitations, including a prohibition on discharge, if necessary, to ensure this goal". As noted in the *Analysis of the Section 316 Thermal Discharge Application for the EcoElectrica Liquid Natural Gas Import Terminal and Cogeneration Project Penuelas, Puerto Rico and Ocean Discharge Criteria Section 403(c) Recommendation, October 1996,* EPA has determined that the discharge will not cause unreasonable degradation of the marine environment. A reopener provision has been included in Part IV.B.5. of the permit that provides EPA the right to modify or revoke the permit based on any new data.

Based on the available information, EPA has determined that the discharge will not cause unreasonable degradation of the marine environment. A reopener provision has been included in the permit Part IV.B.5 that provides EPA the right to modify or revoke the permit based on any new data.

F. Clean Water Act, Section 316(b) Cooling Water Intake Structures

CWA Section 316(b) requires EPA to issue regulations on the design and operation of intake structures, in order to minimize adverse impacts. It is EPA's Best Professional Judgement (BPJ) that the Permittee has demonstrated that entrainment and impingement impacts at the facility are minimal. The existing location, design, construction and cooling water intake structure reflect the best available technology for minimizing adverse impact, and as such are in compliance with CWA Section 316(b).

Best Technology Available for this facility will be the continued operation of the closed-cycle cooling towers, continued operation of the wedgewire screen at the cooling water intake structure, and continued minimization of intake velocity.

G. Clean Water Act, Section 401(a)(2) Neighboring Jurisdictions

EcoEléctrica , L.P. is location on the island of Puerto Rico and discharges to Guayanilla Bay. Puerto Rico is located in the northeast Caribbean Sea, approximately 1,000 miles southeast of Miami, Florida between the Dominican Republic and the U.S. Virgin Islands. Puerto Rico includes an eponymous main island and several smaller islands, such as Mona, Culebra, and Vieques. The closest neighboring jurisdiction to Puerto Rico is the U.S. Virgin Islands, located approximately 45 miles east of Puerto Rico. The contiguous or conterminous US2 is approximately 1,000 miles northeast of Puerto Rico.
Pollutants in open ocean settings tend to experience rapid dilution due to high turbulence, stratification, and dispersive forces. The ocean currents move westerly from the U.S. Virgin Islands towards Puerto Rico.

Based on the nature of the discharge, physical and chemical factors prevalent in receiving ocean waters, prevailing ocean currents, and distance to any neighboring jurisdiction, EPA has no basis to conclude that a discharge from EPA-issued CWA section 402 permitted projects in Puerto Rico may affect the water quality of Florida or the U.S. Virgin Islands.

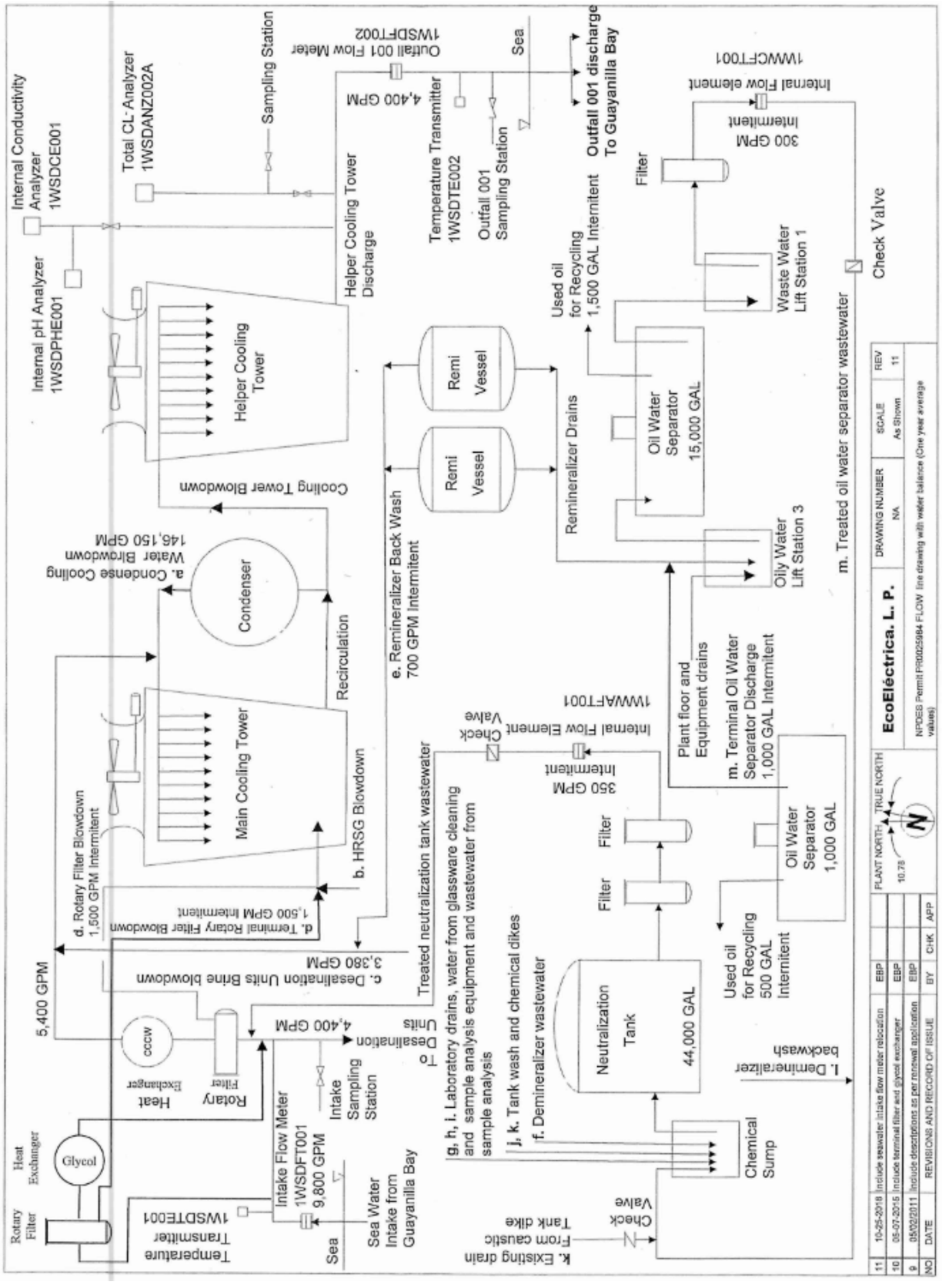
PART V. PUBLIC PARTICIPATION

The procedures for reaching a final decision on the draft permit are set forth in 40 CFR Part 124 and are described in the public notice for the draft permit, which is published on EPA's website at https://www.epa.gov/npdes-permits/puerto-rico-npdes-permits. Included in the public notice are requirements for the submission of comments by a specified date, procedures for requesting a hearing and the nature of the hearing, and other procedures for participation in the final agency decision. EPA will consider and respond in writing to all significant comments received during the public comment period in reaching a final decision on the draft permit. Requests for information or questions regarding the draft permit should be directed to

Sieglinde Pylypchuk
EPA Region 2, Water Division
212-637-4133, pylypchuk.sieglinde@epa.gov

ATTACHMENT A — FACILITY FLOW SCHEMATIC

The flow schematic is attached as provided by the discharger in the application.

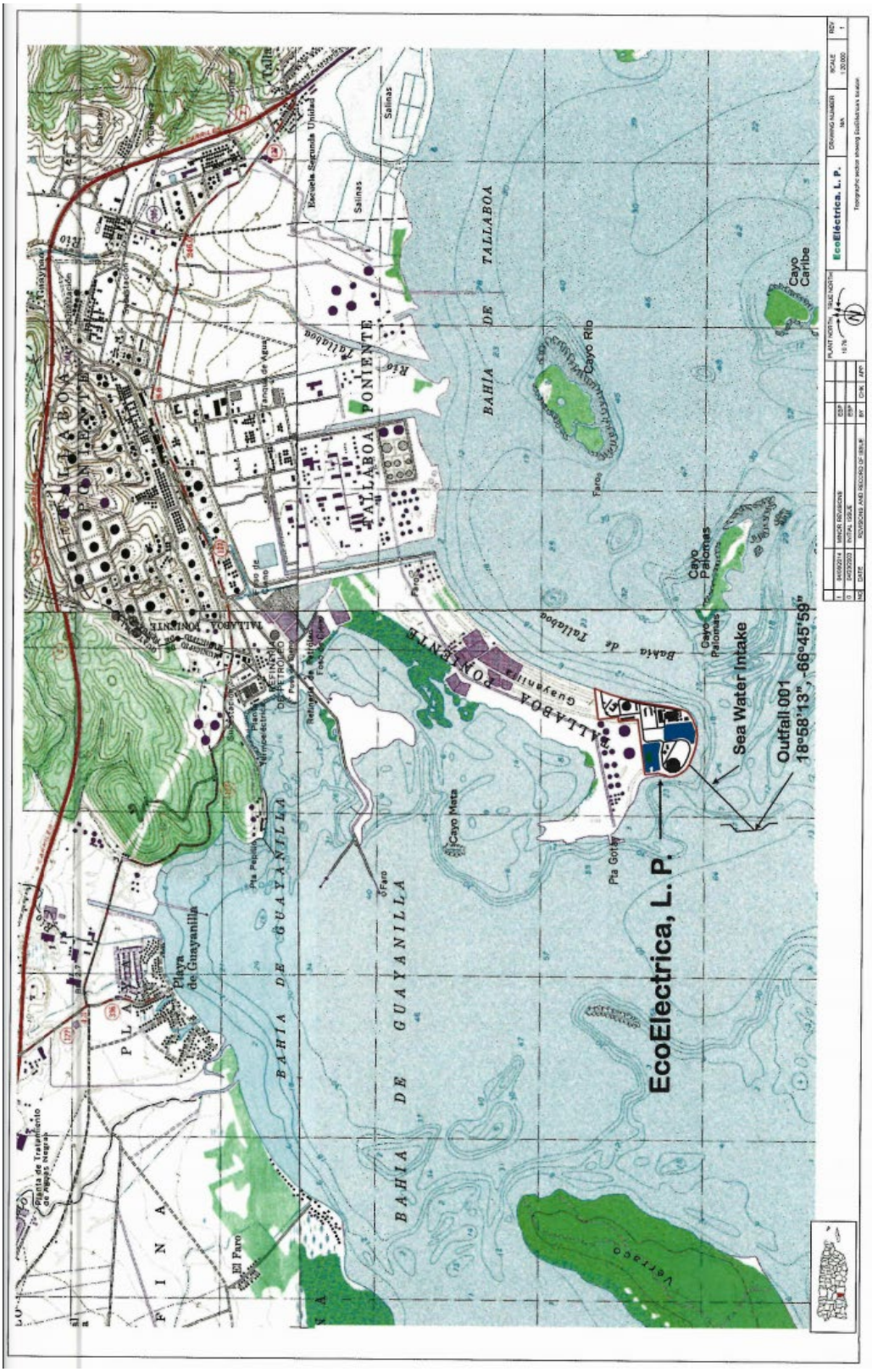


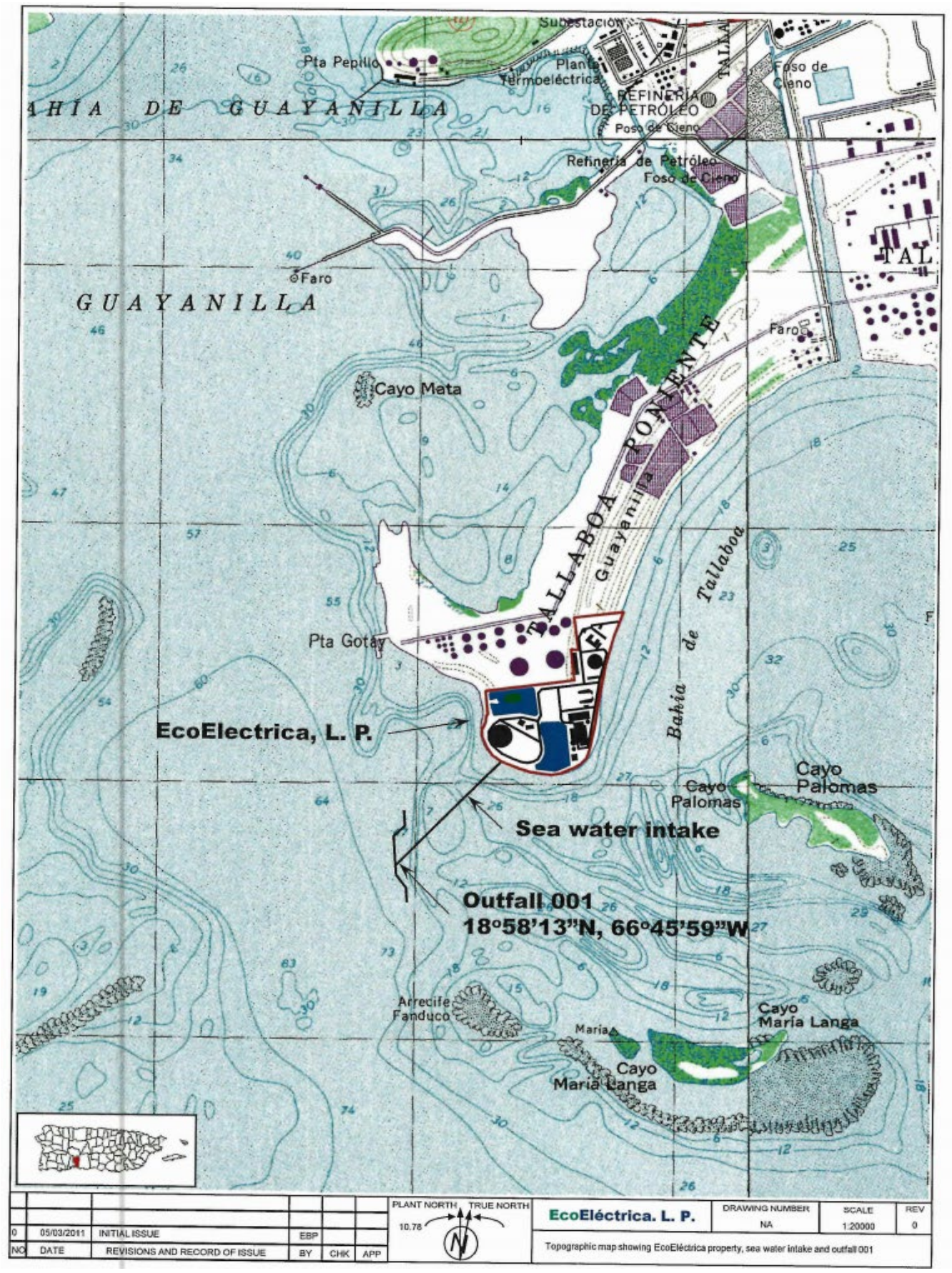
ATTACHMENT B — FACILITY LOCATION AERIAL MAP

The aerial location map is attached as provided by the discharger in the application.

ATTACHMENT C — FACILITY LOCATION TOPOGRAPHIC MAPS

The topographic location maps are attached as provided by the discharger in the application.




Subestación
Pta Pepillo
Planta Termoeléctrica
REFINERIA DE PETRÓLEO
Foso de Cieno
TALLA
AHIA DE GUAYANILLA
Refinería de Petróleo
Foso de Cieno
Faro
GUAYANILLA
TAL
Faro
Cayo Mata
TALLABOA
Guayanilla
PONIENTE
Pta Gotay
EcoElectrica, L. P.
Bahía de Tallaboa
Cayo Palomas
Cayo Palomas
Sea water intake
Outfall 001
18°58'13"N, 66°45'59"W
Arrecife Fanduco
Cayo María Langa
María
Cayo María Langa
PLANT NORTH
TRUE NORTH
10.78
N
EcoEléctrica. L. P.
DRAWING NUMBER
NA
SCALE
1:20000
REV
0
Topographic map showing EcoEléctrica property, sea water intake and outfall 001
0
05/03/2011
INITIAL ISSUE
EBP
NO
DATE
REVISIONS AND RECORD OF ISSUE
BY
CHK
APP

ATTACHMENT D — EPA R2 REASONABLE POTENTIAL ANALYSIS

The following pages summarize the reasonable potential analysis for the parameters listed below:

- Arsenic
- Chlorine, Total Residual
- Chromium
- Color
- Copper
- Cyanide
- Mercury
- Oil & Grease
- pH
- Total Suspended Solids
- Sulfide
- Surfactants
- Temperature
- Turbidity
- Zinc

Relevant Terms and Acronyms:

Number of samples: number of samples used to conduct the analysis
Min: value of the lowest sampling result
Max: value of the largest sampling result
WQS – SB: Water Quality Standard for SB waters
RWC: projected Receiving Water Concentration
RP: reasonable potential

Evaluating Reasonable Potential:

If the projected RWC is greater than the WQS for the appropriate water body classification, the analysis indicates that the discharge will cause, have the reasonable potential to cause, or contribute to an exceedance of WQS.

Outfall 001								
DMR data from 12/20/2017 to 12/20/2022								
Parameter	**Units**	**No. of Samples**	**Min**	**Mean**	**Max**	**WQS - SB**	**RWC**	**RP**
Arsenic	ug/l	4	0.006	3.5	9	36	23.27	no
Chlorine, total residual	mg/l	59	0.01	0.02	0.09	0.0075	0.12	yes
Chromium, total (as Cr)	mg/l	59	0.01	0.02	0.04		0.05	N/A
Color	PtCo	59	5	5.34	15	5	17.63	yes
Copper, total (as Cu)	ug/l	18	1	2.09	3.1	3.73	3.78	yes
Cyanide, free available	ug/l	59	0.7	1.08	5	0.001	6.56	yes
Mercury, total (as Hg)	ug/l	18	0.01	0.02	0.05	0.051	0.07	yes
Oil & grease	mg/l	59	1.2	4.1	12		16.88	N/A
pH	SU	59	8.22	8.34	9.17	8.5	9.28	yes
Solids, total suspended	mg/l	59	4	14.11	101		172.32	yes
Sulfide - hydrogen sulfide (undissociated)	ug/l	4	0.004	2.5	4	2	10.34	see Part II.A
Surfactants	ug/l	5	0.03	18.21	42	500	97.63	no
Temperature	C*	59	27	29.75	33.1	30	33.8	see Part II.A
Turbidity	NTU	59	0.55	2.74	5.68	10	6.85	no
Zinc, total	ug/l	18	3	11.39	44	85.62	67.75	no

ATTACHMENT E — PR DNER FINAL WATER QUALITY CERTIFICATE

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF NATURAL AND ENVIRONMENTAL RESOURCES

RETURN RECEIPT REQUESTED

DEC 12 2022

Eng. Oscar Cedeño
Environmental and Fuels Manager
Ecoeléctrica L.P.
Administration Building
Firm Delivery
641 Road 337 Km3.7
Peñuelas, Puerto Rico 00624-9804

Dear Eng. Cedeño:

RE: WATER QUALITY CERTIFICATE
ECOELÉCTRICA, L.P.
STATE ROAD NO. 337, KM 3.7
PEÑUELAS, PUERTO RICO
NPDES NO. PR0025984

We have received and reviewed the application for a permit under Section 402, National Pollutant Discharge Elimination System (NPDES), of the Federal Clean Water Act, as amended (33 U.S.C. 466 *et seq.*) (the Act) for the referenced facility.

Pursuant to Section 401 (a) (1) of the Act, after due consideration of the applicable provisions established in the Puerto Rico Water Quality Standards Regulation, as amended and in Sections 301, 302, 303, 306 and 307 of the Act, it is certified that there is reasonable assurance, as determined by the Department of Natural and Environmental Resources (DNER), as successor of the Environmental Quality Board, that the allowed discharge will comply with the applicable water quality requirements if the limitations and monitoring requirements on Table A-1 are met. The conditions specified in the aforementioned table shall be incorporated into the NPDES permit in order to satisfy the provisions of Section 401 (d) of the Act.

The applicant must comply with the aforementioned special conditions. Each condition of this WQC is considered as separate. Therefore, if the applicability of any condition of this WQC is stayed due to any circumstance, the remaining conditions of this WQC will not be affected. Pursuant to the provisions of the Title 40 of the Code of Federal Regulations (CFR) Part 121.11 (c), the Environmental Protection Agency shall be responsible for enforcing the WQC's conditions incorporated in the federal permit.

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This certification applies only to the effects that this activity may have on water quality, and not for other ecological, biological or environmental effects that may result from the project.

The DNER reserves the right to comment at a later date concerning other environmental aspects of the discharge.

Cordially,

Anaís Rodríguez Vega
Secretary
Department of Natural and Environmental Resources

Enclosures

c: Ms. Virginia Wong, EPA-2

G:\División de Permisos para Fuentes Precisadas\WORD\Britzadia\ICCA\DWQC EcoEléctrica (2022)_R.doc

TABLE A-1 **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS** **NPDES NO. PR0025984**

During the period beginning on the Effective Date of the NPDES Permit (EDP) and lasting through the EDP + 5 years, the permittee is authorized to discharge from outfall serial number 001 wastewater consisting of the following: cooling tower blowdown (boiler blowdown, desalination plant brine blowdown and backwash water from the remineralization system); treated stream from the neutralization system (demineralizer wastewater, laboratory drains, tank washes and chemical dike drains) and demineralizer backwash; and treated stream from the oil/water separators (oil water from plant floor drains and equipment drain lines, and remineralizer drains). Such discharge shall be limited and monitored by the permittee as specified below:

Receiving Water Name and Classification: Bahía de Guayanilla, SB

Effluent Characteristics	Gross Discharge Limitations		Monitoring Requirements	
	Monthly Average	Daily Maximum	Measurements Frequency	Sample Type
Arsenic (As) (µg/L)		----	Annually	Grab
BOD_5 (mg/L)	30.0		Monthly	Composite
Color (Pt-Co Units)	Shall not be altered by other than natural causes. (*)		Monthly	Grab
Copper (Cu) (µg/L)		3.73 (*)	Annually	Grab
Cyanide, Free (CN) (µg/L) β		1.0 (*)	Monthly	Grab
Dissolved Oxygen (mg/L)	Shall not contain less than 5.0.		Daily	Grab
Flow m^3/day (MGD)		81,007 (21.4)	Continuous Recording	
Mercury (Hg) (µg/L) β		0.051 (*)	Annually	Grab
Oil and Grease (mg/L)	The waters of Puerto Rico shall be substantially free from floating non-petroleum oils and greases as well as petroleum derived oil and greases.		Twice per Month	Grab

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TABLE A-1 **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS** **NPDES NO. PR0025984**

Receiving Water Name and Classification: Bahía de Guayanilla, SB

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Effluent Characteristics	Gross Discharge Limitations		Monitoring Requirements	
	Monthly Average	Daily Maximum	Measurements Frequency	Sample Type
pH (SU)	Shall always lie between 7.3 and 8.5.		Daily	Grab
Residual Chlorine (µg/L) γ		20	Daily	Grab
Solids and Other Matter	The water 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 water body.		----	----
Suspended, Colloidal or Settleable Solids (mL/L)	Solids from wastewater sources shall not cause deposition in, or be deleterious to the existing or designated uses of the water body.		Monthly	Grab
Taste or Odor Producing Substances	Shall not be present in amounts that will render any undesirable taste or odor to edible aquatic life.		----	----
Temperature °F (°C) ϕ	The discharge water temperature shall comply with one of the following: not be exceed 90 °F (32.2 °C), or not be exceed the intake water temperature by more than 1.8 °F (1 °C).		Daily	Grab
Temperature difference between Intake water and the discharge °F (°C) ϕ	Shall no exceed 1.8 °F (1 °C), if the discharge temperature is more than 90 °F (32.2 °C).		Daily	Grab
Total Suspended Solids (mg/L)	---- (*)	---- (*)	Monthly	Composite

TABLE A-1 **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS** **NPDES NO. PR0025984**

Receiving Water Name and Classification: Bahía de Guayanilla, SB

Effluent Characteristics	Gross Discharge Limitations		Monitoring Requirements	
	Monthly Average	Daily Maximum	Measurements Frequency	Sample Type
Turbidity (NTU)		10 (*)	Quarterly	Grab
Zinc (Zn) (µg/L)		85.62 (*)	Annually	Grab
Special Conditions	See attached sheet, which contains special conditions part of this certification.		----	----

Notes:

To comply with the monitoring requirements specified above, samples shall be taken at the sampling point for discharge 001.
All flow measurements shall achieve accuracy within the range ± 10%.

γ See Special Conditions 6 and 7.
β See Special Condition 10.

ϕ In order to demonstrate compliance with the effluent limitation established herein, the intake water and the discharge 001 monitoring must be conducted at the frequency specified herein. The permittee shall account for the residence time of the intake water when scheduling the intake water and the discharge 001 monitoring. The permittee shall report the results of these measurements in the Discharge Monitoring Reports. Alternatively, the permittee may forego the intake water monitoring and comply with the effluent limitation of 90 °F (32.2 °C).

* No Net Addition Limitation

- If the applicable water quality standard is not exceeded in the inlet, the established effluent limitation shall not be exceeded at the discharge point 001.

- If the applicable water quality standard is not exceeded in the inlet, the same measurements shall be achieved at the discharge point 001.

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Receiving Water Name and Classification: Bahía de Guayanilla, SB

In order to demonstrate compliance with the No Net Addition Limitation, influent (raw water from Bahía de Guayanilla) and effluent (filters backwash and sedimentation tank drain) monitoring must be conducted at the frequency specified herein. The permittee shall take into consideration the residence time of the influent when scheduling influent and effluent monitoring. The permittee shall report the results of these measurements in the Discharge Monitoring Reports. Alternately, the permittee may forego influent monitoring and comply with the applicable water quality standard as effluent limitation at the end of the pipe of the discharge.

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A. SPECIAL CONDITIONS

NPDES NO. PR0025984

These special conditions are an integral part of the Water Quality Certificate (WQC) and are authorized by Article 9 of the Environmental Public Policy Act, Law No. 416-2004, as amended. Therefore, they must be incorporated into the NPDES permit in order to satisfy the provisions of Section 401(d) of the Federal Clean Water Act (CWA) as amended (33 U.S.C. 466 *et seq.*):

1. The flow of discharge 001 shall not exceed the limitation of 81,007 m^3/day (21.4 MGD) as daily maximum. No increase in flow of discharge 001 shall be authorized without a recertification from the Department of Natural and Environmental Resources (DNER).

2. The discharge 001 consists of wastewater consisting of the following: cooling tower blowdown (boiler blowdown, desalination plant brine blowdown and backwash water from the remineralization system); treated stream from the neutralization system (demineralizer wastewater, laboratory drains, tank washes and chemical dike drains) and demineralizer backwash; and treated stream from the oil/water separators (oil water from plant floor drains and equipment drain lines, and remineralizer drains).

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

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

5. 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.

6. 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 NPDES permit, shall not exceed the concentrations specified in the applicable regulatory limitations.

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

8. The discharge 001 shall not cause the presence of oil sheen in the receiving water body.

9. 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 licensed medical technologist authorized to practice the profession in Puerto Rico.

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

11. The flow-measuring device for the discharge 001, shall be periodically calibrated and properly maintained. Calibration and maintenance records must be kept in compliance with the Applicable Rules and Regulations.

12. The sampling point for discharge 001 shall be located immediately after the primary flow-measuring device of the effluent of the treatment system.

13. The sampling point for discharge 001 shall be labeled with an 18 inches per 12 inches (minimum dimensions) sign that reads as follows:

"Punto de Muestreo para la Descarga 001"

14. All water or wastewater treatment facilities, whether publicly or privately owned, must be operated by a person licensed by the Examination Board of Water and Wastewater Treatment Plants Operators of Puerto Rico.

15. This special condition shall not become in effect until DNER has determined the applicability to the respective facility and has notified the permittee and EPA, in writing, of the necessity to comply with this special condition.

No later than one hundred eighty (180) days after the Effective Date of this Special Condition (EDSC), the permittee shall conduct semiannually acute toxicity tests for a period of one (1) year, after which the tests shall be performed annually, of its wastewater discharge through outfall serial number 001 in accordance with the following:

a. The test species should be silverside (Menidia beryllina) and mysid (Mysidopsis bahia). The tests should be static renewal type.

b. The toxicity tests shall be conducted in accordance with the EPA publication, EPA 821-R-02-012 Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (Fifth Edition), October 2002, or the most recent edition of this publication, if such edition is available.

c. The tests shall provide a measure of the acute toxicity as determined by the wastewater concentration, which cause 50 percent mortality of the test organisms over a 48-hour period. The test results shall be expressed in terms of Lethal Concentration (LC) and reported as 48-hour LC_{50}.

d. A procedure report shall be submitted within ninety (90) days after the EDSC. The following information shall be included in the procedure report:

1. An identification of the organizations responsible for conducting the tests and the species to be tested.

2. A detailed description of the methodology to be utilized in the conduct of the tests, including equipment, sample collection, dilution water and source of test organisms.

3. A schematic diagram, which depicts the effluent sampling location in relation to the wastewater treatment facility and the discharge monitoring point.

e. The results of the tests conducted shall be submitted to the Clean Water Regulatory Branch, Water Division of EPA's Region 2 and the DNER's Water Quality Area, within sixty (60) days of completion of each test. Based on the review of the test results, the Regional Administrator of EPA or the DNER can require additional toxicity tests, including chronic tests and toxicity/treatability studies, and may impose toxicity limitations.

16. The solid waste such as sludge, screenings and grit, generated due to the operation of the treatment system shall be:

a. Disposed in compliance with the applicable requirements established in the 40 CFR, Part 257. A semiannual report shall be submitted to the Water Quality Area and the Land Pollution Control Area of the DNER and to the Clean Water Regulatory Branch, Water Division of EPA's Region 2, notifying the method or methods used to dispose the solid waste generated in the facility. Also, copy of the approval or permit applicable to the disposal method used shall be submitted, if any.

b. Transported adequately in such way that access is not gained to any water body or soil. In the event of a spill of solid waste on land or into a water body, the permittee shall notify the Point Sources Permits Division of the DNER's Water Quality Area in writing within a term no longer than twenty-four (24) hours after the spill to the following electronic address: bypass@drna.pr.gov.

This notification shall include the following information:

a. spilled material,
b. spilled volume,
c. measures taken to prevent the spilled material to gain access to any water body.

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

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

    a. removed material, date and source of it;
    b. approximate volume and weight;
    c. method by which it is removed and transported;
    d. final disposal and location;
    e. person that performs the service.

    A copy of the Non-Hazardous Solid Waste Collection or Transportation Services Permit issued by the authorized official from the DNER must be attached to the log book.

18. The DNER, by the issuance of the WQC, does not relieve the applicant from its responsibility to obtain additional permits or authorizations from the DNER as required by law. The issuance of the WQC shall not be construed as an authorization to conduct activities not specifically covered in the WQC, which will cause water pollution as defined by the PRWQSR, as amended.

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B. CITATION AND JUSTIFICATION FOR SPECIAL CONDITIONS (40 CFR 121.7(d)(2))

Special Condition	Statement explaining why the condition is necessary (40 CFR 121.7(d)(2)(i))	Citation to federal or state law that authorizes the condition (40 CFR 121.7(d)(2)(ii))
1, 2	These special conditions are established to assure that no changes in nature or flow of the allowed discharge occur without an evaluation of the effects of such changes in the compliance with the applicable water quality requirements set forth in the PRWQSR and in Sections 301, 302 and 303 of the CWA.	• Rule 1306.1.B of the PRWQSR • Sections 301, 302 and 303 of the CWA
3, 4	These special conditions are necessary to assure that the treatment system evaluated and authorized, for compliance with the requirement to implement control measures to prevent adverse effects on the receiving water body, is not altered without prior authorization from DNER.	• Rule 1306.7 of the PRWQSR
5, 11	These special conditions are necessary to require the permittee to establish control measures to prevent that the discharge coming from the facility affects or causes impairment to the applicable water quality requirements set forth in the PRWQSR and in Sections 301, 302 and 303 of the CWA.	• Rule 1306.6.A.1 of the PRWQSR • Sections 301, 302 and 303 of the CWA
6, 7	These special conditions are established to assure that the discharge coming from the facility does not affect or cause impairment to the applicable water quality requirements set forth in the PRWQSR and Sections 301, 302, 303 and 307 of the CWA.	• Rule 1303.1.J of the PRWQSR • Rule 1306.1.B of the PRWQSR • Sections 301, 302, 303 and 307 of the CWA
8	This special condition is established to assure that the discharge coming from the facility does not affect or cause impairment to the applicable water quality requirements set forth in the PRWQSR and Sections 301, 302 and 303 of the CWA.	• Rule 1303.1.H of the PRWQSR • Rule 1306.1.B of the PRWQSR • Sections 301, 302 and 303 of the CWA
9	This special condition is necessary to establish source monitoring, record keeping, reporting, sampling, and testing methods requirements in the WQC, to assure that the allowed discharge will comply with the applicable water quality requirements established in the PRWQSR and in Sections 301, 302 and 303 of the CWA.	• Rule 1306.2.C of the PRWQSR • Sections 301, 302 and 303 of the CWA
10	This special condition is necessary to establish source monitoring, record keeping, reporting, sampling, and testing methods requirements in the WQC, to assure that the allowed discharge will comply with the applicable water quality requirements established in the PRWQSR and in Sections 301, 302 and 303 of the CWA.	• Rule 1306.2.C of the PRWQSR • Rule 1306.8 of the PRWQSR • Sections 301, 302 and 303 of the CWA

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Special Condition	Statement explaining why the condition is necessary (40 CFR 121.7(d)(2)(i))	Citation to federal or state law that authorizes the condition (40 CFR 121.7(d)(2)(ii))
12, 13	These special conditions are necessary to assure proper characterization of the discharge to comply with the applicable water quality requirements established in the PRWQSR and in Sections 301, 302 and 303 of the CWA.	• Rule 1306.2.E of the PRWQSR • Sections 301, 302 and 303 of the CWA
14	This special condition is necessary to assure that the discharge will comply with the water quality requirements established in the PRWQSR.	• Rule 1306.6.B of the PRWQSR
15	This special condition is necessary to establish source monitoring, record keeping, reporting, sampling, and testing methods requirements in the WQC, to assure that the allowed discharge will comply with the applicable water quality requirements established in the PRWQSR and in Sections 301, 302, 303 and 307 of the CWA.	• Rule 1306.9 of the PRWQSR • Sections 301, 302, 303 and 307 of the CWA.
16	This special condition is necessary to require the permittee to establish Best Management Practice to prevent that solids and other pollutants coming from the facility gaining access to the water body, in such manner that the permitted activity comply with the applicable water quality requirements established in the PRWQSR, and in Sections 301, 302 and 303 of the CWA. Also, this condition is necessary to establish record keeping and reporting requirements in the WQC, to comply with water quality requirements established in the PRWQSR.	• Rule 1306.1 of the PRWQSR • Rule 1306.2 of the PRWQSR • Rule 1306.4 of the PRWQSR • Rule 1306.6.A.2 of the PRWQSR • Sections 301, 302 and 303 of the CWA
17	This special condition is necessary to establish source monitoring, record keeping, reporting, sampling, and testing methods requirements in the WQC, to assure that the allowed discharge will comply with the applicable water quality requirements established in the PRWQSR and in Sections 301, 302, and 303 of the CWA.	• Rule 1306.2.A of the PRWQSR • Sections 301, 302 and 303 of the CWA
18	This special condition is necessary to require the permittee to establish the Best Management Practice to prevent pollutants coming from facility gaining access to the water body, in such manner that the facility comply with the applicable requirements established in the PRWQSR concerning the conservation and protection of the natural resources that may affect the quality of water resources.	• Rule 1306.1.B of the PRWQSR
Table A-1	Table A-1 is necessary to establish the water quality-based effluent limitations and monitoring requirements in order to assure that the allowed	• Rule 1302 of the PRWQSR • Rule 1303 of the PRWQSR • Rule 1306 of the PRWQSR

Special Condition	Statement explaining why the condition is necessary (40 CFR 121.7(d)(2)(i))	Citation to federal or state law that authorizes the condition (40 CFR 121.7(d)(2)(ii))
	discharge will comply with the applicable water quality requirements established in the PRWQSR and in Sections 301, 302, 303 and 307 of the CWA.	• Sections 301, 302, 303 and 307 of the CWA