

NPDES PERMIT NO. PR0025445

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Clean Water Act, as amended, 33 U.S.C. § 1251 et. seq. (the "Act"),

Puerto Rico Aqueduct and Sewer Authority
P.O. Box 7066
Barrio Obrero Station
San Juan, Puerto Rico 00916

hereinafter referred to as "the permittee" is authorized to discharge from a facility named **Guayama Wastewater Treatment Plant** located at:

State Road No. 710 Km. 1.1
Guayama, Puerto Rico

to receiving waters named:

Caribbean Sea

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I and II hereof. All references to Title 40 of the Code of Federal Regulations are to regulations that are in effect on the effective date of this permit, including all amendments thereto published in the Federal Register. Unless otherwise specified herein, all terms are defined as provided in the applicable regulations under Title 40 of the Code of Federal Regulations.

This permit shall become effective on **December 1, 2013**, which is the Effective Date of Permit (EDP).

This permit and the authorization to discharge shall expire at midnight, **November 30, 2018**.

Signed this 16th day of Sept. 2013,



José C. Font,
Director
Caribbean Environmental
Protection Division

TABLE I
REQUIRED EFFLUENT LIMITATIONS

EFFLUENT CHARACTERISTICS	DISCHARGE LOAD ALLOCATIONS		DISCHARGE CONCENTRATIONS LIMITATIONS		MINIMUM PERCENT REMOVAL LIMITATION
	Average Monthly	Average Weekly	Average Monthly	Average Weekly	Average Monthly
	(kg/day)	(kg/day)	(mg/l)	(mg/l)	
5-Day-20°C Biochemical Oxygen Demand ¹	1135	1703	30.0	45.0	85%
Suspended ¹ Solids	1135	1703	30.0	45.0	85%

Flow shall be reported as a monthly average and daily maximum.
Measurement frequency shall be continuous

¹ Measurement frequency shall be Twice per Week using composite sampling.

TABLE A-1 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the EDP and lasting through the expiration date of the permit, the permittee is authorized to discharge from outfall serial number 001 (treated wastewaters). Such discharge shall be limited and monitored by the permittee as specified below:

Receiving Water Classification: SC

<u>Effluent Characteristics</u>	<u>Gross Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Monthly Avg.	Daily Max	Measurements Frequency	Sample Type
Arsenic (As) ($\mu\text{g/L}$) ^{2,3}		36	Quarterly	Grab
BOD ₅ (mg/L) ^{1,2,3}		See Table I.	Twice per Week	Composite
Color (Pt-Co Units) ^{2,3}	Shall not be altered by other than natural phenomena except when it can be proven that such change in color is harmless to biota and aesthetically acceptable.		Monthly	Grab
Copper (Cu) ($\mu\text{g/L}$) ^{2,3}		3.73	Monthly	Grab
Cyanide, Free (CN) ($\mu\text{g/L}$) β ^{2,3}		1.0	Monthly	Grab
Dissolved Oxygen (mg/L) ^{1,2,3}	Shall contain not less than 4.0.		Daily	Grab
Enterococci Density ^{1,3}	The geometric mean of a series of at least five representative samples taken sequentially shall not exceed 35/100 mL. No single sample should exceed the upper confidence limit of 75% using 0.7 as the log standard deviation until sufficient data exist to establish a site-specific log standard deviation.		Monthly	Grab

<u>Effluent Characteristics</u>	<u>Gross Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Monthly Avg.	Daily Max	Measurements Frequency	Sample Type
Fecal Coliforms (colonies/100 mL) ^{1,2,3}	The coliforms geometric mean of a series of representative samples (at least five samples), of the waters taken sequentially shall not exceed 200 colonies/100 mL. Not more than 20 % of the samples shall exceed 400 colonies/100 mL.		Monthly	Grab
Flow m ³ /day(MGD) ^{1,3,4}		37,854 (10.0)	Continuous Recording	
Lead (Pb) (µg/L) ^{2,3}		8.52	Quarterly	Grab
Mercury (Hg) (µg/L) β _{2,3}		0.051	Quarterly	Grab
Nitrogen (NO ₃ , NO ₂ , NH ₃) (µg/L) ^{2,3}		5,000	Monthly	Grab
Oil and Grease (mg/L) _{2,3}	The water of Puerto Rico shall be substantially free from floating non-petroleum oils and greases as well as petroleum derived oils and greases.		Twice per Month	Grab
pH (SU) ^{2,3}	Shall always lie between 7.3 and 8.5.		Daily	Grab
Residual Chlorine (mg/L) γ ^{2,3}		0.50	Daily	Grab
Silver (Ag) (µg/L) ^{2,3}		2.24	Monthly	Grab

<u>Effluent Characteristics</u>	<u>Gross Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Monthly Avg.	Daily Max	Measurements Frequency	Sample Type
Solids and Other Matters ^{2,3}	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 water body.		----	----
Sulfide (Undissociated H ₂ S) (µg/L) ξ ^{2,3}		2	Quarterly	Grab
Surfactants (as MBAS) (µg/L) ^{1,2,3}		500	Quarterly	Grab
Suspended, Colloidal or Settleable Solids (mL/L) ^{1,2,3}	Solids from wastewaters source shall not cause deposition in, or be deleterious to the existing or designated uses of the water body.		Daily	Grab
Taste and Odor-producing Substances ^{2,3}	Shall not be present in amounts that will render any undesirable taste or odor to edible aquatic life.		----	----
Temperature °F (°C) ^{2,3}	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).		Daily	Grab
Total Suspended Solids (mg/L) ³		See Table I.	Twice per Week	Composite

<u>Effluent Characteristics</u>	<u>Gross Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Monthly Avg.	Daily Max	Measurements Frequency	Sample Type
Turbidity (NTU) ^{2,3}		10	Monthly	Grab
Special Conditions	See attached sheet, which contains special conditions that constitute part of this certification.		----	-----

1, 2, 3, 4, 5 and 6 see page 12.

To comply with the monitoring requirements specified above, samples shall be taken at the outfall of discharge serial number 001.

All flow measurements shall achieve accuracy within the range of plus or minus 10%.

γ See Special Conditions 6 and 7.

β See Special Condition 10.

ξ See Special Condition 11.

A. SPECIAL CONDITIONS

These special conditions are an integral part of the permit:

1. The flow of discharge 001 shall not exceed the limitation of 37,857 m³/day (10.0 MGD) as daily maximum. No increase in flow of discharge 001 shall be authorized without a recertification from the Puerto Rico Environmental Quality Board (EQB).^{1,4}
2. The permittee shall provide written notice to the EQB and the Environmental Protection Agency (EPA) of the following changes that may affect the treatment system:
 - a. Any new introduction of pollutants, not exclusively sanitary, coming from an industrial facility. If the industrial facility is an existing significant industrial user, shall notify only when the new introduction of pollutants, exceeds 1,000 gallons/day.
 - b. Any significant change in volume or character of pollutants being introduced into the treatment system by an existing source that may cause a variation in the quality of the effluent to be discharged.

Such notice shall include information of the quality and quantity of the effluent to be introduced into such treatment system and the anticipated impact of such change in quantity and/or quality of the effluent to be discharged from the system.^{4,6}

3. No changes in the design or capacity of the treatment system will be permitted without the previous authorization of EQB.⁴
4. 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.⁴
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.^{1,3}
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.^{2,3}
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.²
8. The discharge 001 shall not cause the presence of oil sheen in the receiving water body.²

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. ^{1,3}
10. The samples taken for the analysis of cyanide and mercury shall be analyzed using the analytic method approved by the EPA with the lowest possible detection level, in accordance with Rule 1306.8 of the Puerto Rico Water Quality Standards Regulation (PRWQSR) as amended. ^{1,3}
11. The permittee shall use the EPA approved 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 H₂S. 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 H₂S shall be reported as "below detection limit". ^{1,3}
12. 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. ^{3,4}
13. The sampling point for discharge 001 shall be located immediately after the primary flow-measuring device of the effluent of the treatment system.
14. The sampling point for discharge 001 shall be labeled with an 18 inches per 12 inches (minimum dimension) sign that reads as follows:

"Punto de Muestreo para la Descarga 001"
15. 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. ³
16. Not later than one hundred eighty (180) days after the Effective Date of the NPDES Permit (EDP), the permittee shall conduct semi-annual acute toxicity tests for a period of one (1) year, after which the tests shall be performed annually, of its wastewaters discharge through Outfall Serial Number 001, in accordance with the following: ³
 - a. The test species should be *Silverside* (*Menidia beryllina*) and *Mysid* (*Mysidopsis bahia*). The test 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 wastewaters concentration, which cause 50 percent mortality of the test organisms over a 48-hours period. The test results shall be expressed in terms of Lethal Concentration (LC) and reported as 48-hours, LC₅₀.
 - d. A procedure report shall be submitted within ninety (90) days after the EDP. 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 wastewaters treatment facility and discharge monitoring point.
 - e. The results of the tests conducted shall be submitted to EPA Region 2 and EQB within sixty (60) days of completion of each test. Based on a review of the test results, the Regional Administrator of EPA or the EQB can require additional toxicity tests, including chronic tests and toxicity/treatability studies, and may impose toxicity limitations.
17. The solid wastes such as sludge, screenings and grit, generated due to the operation of the Guayama Regional Wastewaters Treatment Plant, shall be:
- a. Disposed in compliance with the applicable requirements established in the 40 CFR, Part 257. A semiannual report shall be submitted to EQB and EPA notifying the method or methods used to dispose the solid wastes 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 wastes on land or into a water body, the permittee shall notify the Point Sources Permits Division of EQB's Water Quality Area in the following manners:
 - 1) By telephone communication within a term no longer than twenty four (24) hours after the spill (787-767-8073).