NPDES PERMIT NO. PR0020494

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 **Guayanilla Wastewater Treatment Plant** located at:

End of Muñoz Rivera Street
Guayanilla, Puerto Rico

to receiving waters named:

Guayanilla River

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 **August 1, 2013,** which is the effective date of permit (EDP).

This permit and the authorization to discharge shall expire at midnight, **July 31, 2018**.

Signed this April 25th day of 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 (kg/day)	Average Weekly (kg/day)	Average Monthly (mg/l)	Average Weekly (mg/l)	Average Monthly
5-Day-20°C Biochemical Oxygen Demand[1]	12	106	5.0*	45.0	85%
Suspended[1] Solids	71	106	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 Month using composite sampling.

* According to EQB's Water Quality Certificate.

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: SD

Effluent Characteristics	Gross Discharge Limitations		Monitoring Requirements	
	Monthly Avg.	Daily Max	Measurements Frequency	Sample Type
2,4,6-Trichlorophenol (μg/L) ϕ [2,3]		---	ϕ	Grab
2-Methyl-4,6-Dinitrophenol (μg/L) ϕ [2,3]		---	ϕ	Grab
BOD_5 (mg/L) α [1,2,3,4]		See Table I.	Twice per Month	Composite
Color (Pt-Co Units) [2,3,4]		15	Monthly	Grab
Copper (Cu) (μg/L) α [2,3,4]		18	Monthly	Grab
Dissolved Oxygen (mg/L) α ε [1,2,3,4]	Shall contain not less than 5.0 mg/L.		Daily	Grab
Fecal Coliforms (colonies/100 mL) [1,2,3]	The coliform 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) [1,3,5]		2,346.9 (0.62)	Continuous Recording	
Lead (Pb) (μg/L) [2,3]		8.2	Quarterly	Grab

Effluent Characteristics	Gross Discharge Limitations		Monitoring Requirements	
	Monthly Avg.	Monitor Daily Max	Measurements Frequency	Sample Type
Mercury (Hg) (µg/L) α φ [2,3,4,8]		Monitor	Monthly	Composite
Nitrate plus Nitrite (as N) (µg/L) α [2,3,4]		10,000	Monthly	Grab
Oil and Grease (mg/L) [2,3]	The waters 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
Pentachlorophenol (µg/L) ϕ [2,3]		---	ϕ	Grab
pH (SU) [2,3]	Shall always lie between 6.0 – 9.0		Daily	Grab
Residual Chlorine (µg/L) γ [2,3]		0.50	Daily	Grab
Solids and Other Matters [2,3]	The waters of Puerto Rico shall not contain floating debris, scum or other floating materials attributable to discharge in amounts sufficient to be unsightly or deleterious to the existing or designed uses of the water body.		---	---
Sulfide (Undissociated H_2S) (µg/L) δ [2,3]		2	Quarterly	Grab
Surfactants (as MBAS) (µg/L) α [2,3,4]		100	Monthly	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 waters.		Daily	Grab

Effluent Characteristics	Gross Discharge Limitations		Monitoring Requirements	
	Monthly Avg.	Daily Max	Measurements Frequency	Sample Type
Taste and Odor-producing Substances [2,3]	Shall contain none in amounts that will render any undesirable taste and/or odor to edible aquatic life.		---	---
Temperature °F (°C) [2,3]	Except for 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 Ammonia (NH_3) (mg/L) [2,3,4]		1.000	Monthly	Grab
Total Coliforms (colonies/100 mL) [1,2,3]	The coliforms geometric mean of a series of representative sample (at least five samples) of the water taken sequentially in a given instance shall not exceed 10,000 colonies/100 mL.		Monthly	Grab
Total Dissolved Solids (mg/L) [2,3,4]		500	Monthly	Grab
Total Phosphorus (P) (mg/L) [2,3]		1.00	Monthly	Grab
Turbidity (NTU) [2,3]		50	Monthly	Grab
Special Conditions	See attached sheet, which contains special conditions that constitute part of this certification.		---	---

Notes:

1, 2, 3, 4, 5, 6, and 8 see page 12 of special conditions

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

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

α A Waste Load Allocation (WLA) was performed in order to develop the water quality based effluent limitations.

ε The water quality standard applicable to this parameter is exceeded in the receiving water body.

γ See Special Conditions 5 and 6.

φ See Special Condition 9.

δ See Special Condition 10.

ξ The samples shall be analyzed using the method approved by EPA in letter of February 20, 2007.

ϕ 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 is necessary for this parameter. In such case the WQC will be reopened to include the applicable effluent limitation.

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 2,346.9 m^3/day (0.62 MGD) as daily maximum. No increase in flow shall be authorized without a recertification from the Puerto Rico Environmental Quality Board (EQB). [1,5]

2. No changes in the design or capacity of the treatment system will be permitted without the previous authorization of EQB. [5]

3. 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. [5]

4. 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]

5. 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. [2,3]

6. 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]

7. The discharge 001 shall not cause the presence of oil sheen in the receiving water body.[2]

8. All sample collection, preservation, and analysis shall be carried out in accordance with the 40 CFR Part 136. A licensed chemist authorized to practice the profession in Puerto Rico shall certify all chemical analyses. A licensed microbiologist or a medical technician authorized to practice the profession in Puerto Rico shall certify all bacteriological tests. [1,3]

9. The samples taken for the analysis of arsenic 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 Section 6.8 of the Puerto Rico Water Quality Standards Regulation (PRWQSR), as amended. [3,8]

10. The permittee shall use the approved EPA analytical method, with the lowest possible detection limit, in accordance with the Code of Federal Regulations Number 40 (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

approved EPA method established in the 40 CFR Part 136, then, the concentration of undissociated H_2S should be reported as "below detection limit". [1,3]

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. [3,5]

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 dimension) sign that reads as follows:

"Punto de Muestreo para la Descarga 001"

14. 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]

15. Not later than one hundred eighty (180) days after the EDP, the permittee shall conduct quarterly 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 *Fathead Minnow* (Pimephales promelas) and *Cladocera* (Daphnia magna). 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 organisms over a 48-hour period. The test results shall be expressed in terms of Lethal Concentration (LC) and reported as 48 hour LC50.

    d. A procedure report shall be submitted to EPA Region II and EQB ninety (90) days after 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.