

NPDES PERMIT NO. PR0025101

**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 **Parcelas Borinquen Wastewater Treatment Plant** located at:

State Road No. 765 Km. 2.9  
Bo. Borinquen  
Caguas, Puerto Rico

to receiving waters named:

**Turabo 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 **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 16<sup>th</sup> 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<sup>1</sup>

34                      51                      30.0                      45.0                      85%

Suspended<sup>1</sup>  
Solids

34                      51                      30.0                      45.0                      85%

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

<sup>1</sup> Measurement frequency shall be Twice per Month 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: SD

<u>Effluent Characteristics</u>	<u>Gross Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Monthly Avg.	Daily Max	Measurements Frequency	Sample Type
BOD <sub>5</sub> (mg/L) <sup>1,2,3</sup>		See Table I.	Twice per Month	Grab
Color (Pt-Co Units) <sup>2,3</sup>		15	Monthly	Grab
Copper (Cu) (µg/L) <sup>2,3</sup>		5	Monthly	Grab
Dissolved Oxygen (mg/L) <sup>1,2,3</sup>	Shall contain not less than 5.0 mg/L.		Daily	Grab
Fecal Coliforms (colonies/100 mL) <sup>1,2,3</sup>	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 <sup>3</sup> /day (MGD) <sup>1,3,4</sup>		0.300	Continuous Recording or Estimated	
Nitrate plus Nitrites (as N) (µg/L) <sup>2,3</sup>		10,000	Monthly	Grab
Oil and Grease (mg/L) <sup>2,3</sup>	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
pH (SU) <sup>2,3</sup>	Shall always lie between 6.0 – 9.0.		Daily	Grab
Residual Chlorine (mg/L)* <sup>2,3</sup>		0.50	Daily	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 <sup>2</sup>	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.		---	---
Sulfates (mg/l)		---	α	Grab
Sulfide (Undissociated H <sub>2</sub> S) (μg/L) <sup>2,3 **</sup>		2	Quarterly	Grab
Surfactants as MBAS (mg/l)		100	Monthly	Grab
Suspended, Colloidal or Settleable Solids (mg/l) <sup>1,2,3</sup>	Solids from wastewaters source shall not cause deposition in, or be deleterious to the existing or designated uses of the waters.		Daily	Grab
Taste and Odor-producing Substances <sup>2,3</sup>	Shall not be present in amounts that will render any undesirable taste and/or to edible aquatic life.		---	---
Temperature °F (°C) <sup>2,3</sup>	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 (mg/l) <sup>2,3</sup>		---	Monthly	Grab
Total Coliforms (col/100 ml)	The coliforms geometric mean of a series of representative samples (at least five samples) of the waters taken sequentially shall not exceed 10,000 colonies/100 mL.		Monthly	Grab
Total Dissolved Solids (mg/l)		500	Annually	Grab
Total Phosphorus (mg/L) <sup>2,3</sup>		1.00	Monthly	Grab

<u>Effluent Characteristics</u>	<u>Gross Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Monthly Avg.	Daily Max	Measurements Frequency	Sample Type
Total Suspended Solids (mg/L) <sup>3</sup>		See Table I.	Twice per Month	Composite
Turbidity (NTU) <sup>2,3,4</sup>		50	Quarterly	Grab
Special Conditions	See attached sheet, which contains special conditions that constitute part of this certification.		---	---

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%.

\* See Special Condition 5 and 6.

\*\* See Special Condition 9.

α 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 (1) 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.

1, 2, 3, 4 and 5 see page 11 of the special conditions.

## A. SPECIAL CONDITIONS

These special conditions are integral part of the permit;

1. The flow of discharge 001 shall not exceed the limitation of 1,135.71 m<sup>3</sup>/day (0.300 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).<sup>1,4</sup>
2. No changes in the design or capacity of the treatment system will be permitted without the previous authorization of EQB.<sup>4</sup>
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.<sup>4</sup>
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.<sup>1,3</sup>
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 NPDES permit, shall not exceed the concentrations specified in the applicable regulatory limitations.<sup>2,3</sup>
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.<sup>2</sup>
7. The discharge 001 shall not cause the presence of oil sheen in the receiving water body.<sup>2</sup>
8. 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.<sup>1,3</sup>
9. The permittee shall use the analytical method approved by the Environmental Protection Agency (EPA), 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<sup>-2</sup> F, Calculation of Un-ionized Hydrogen Sulfide, of Standards Methods 18<sup>th</sup> Edition, 1992, to determine the concentration of undissociated H<sub>2</sub>S. If the sample results of Dissolved Sulfide are below the detection limit of the EPA approved method established in the 40 CFR, Part 136, then, the concentration of undissociated H<sub>2</sub>S shall be reported as "below detection limit".<sup>1,3</sup>



10. 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.<sup>3,4</sup>
11. The sampling point for discharge 001 shall be located immediately after the primary flow-measuring device of the effluent of the treatment system.
12. 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”

13. 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.<sup>3</sup>
14. The permittee shall conduct quarterly acute toxicity tests, for a period of one (1) year, of its wastewater discharge through outfall serial number 001 in accordance with the following:
  - a. 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.
  - b. The tests shall provide a measure of the acute toxicity as determined by the wastewater concentration, which cause 50 percent mortality of the organisms over a 48 hour period. Test results shall be expressed in terms of *Lethal Concentration (LC)* and reported as 48 hour LC50.
  - c. The test species should be the *Fathead Minnow (Pimephales promelas)* and *Cladocera (Daphnia magna)*. The tests should be static renewal type.
  - d. A procedure report shall be submitted to both agencies, EQB and EPA, ninety (90) days after the effective date of the NPDES permit (EDP). The following information shall be included in the procedure report:
    1. An identification of the organizations responsible for conducting the test 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. The diagram shall indicate the location of effluent sampling in relation to wastewaters treatment facility and discharge monitoring point.
- e. The tests shall be conducted quarterly for a period of one (1) year and shall commence not later than one hundred eighty (180) days after EDP. The results shall be submitted to EPA Region II and EQB within sixty (60) days of completion of each test. Based on a review of the test results, EPA or the EQB may require additional toxicity tests, including chronic toxicity analyses. In addition to submitting the procedures report and test results to the addresses listed in Part I.B. of this permit, results shall be submitted to:

MUNICIPAL WATER PROGRAM BRANCH, CHIEF  
CARIBBEAN ENVIRONMENTAL PROTECTION AGENCY  
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION II  
CITY VIEW PLAZA II, #48 RD, 165, KM 1.2  
GUAYNABO, PUERTO RICO 00968-8069
- f. Reopener Clause for Toxicity Testing Requirements  
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. This permit may be reopened by EPA to include such requirements as enforceable permit conditions.
15. The solid wastes such as sludge, screenings and grit, generated due to the operation of the Parcelas Borinquen Wastewater 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).
    - 2) By letter, within a term no longer than five (5) days after the spill.