

NPDES PERMIT NO. PR0021555

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 (PRASA)  
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 located at

Puerto Nuevo Regional Wastewater Treatment Plant  
Road #2 km 2, John F. Kennedy Avenue  
San Juan, Puerto Rico 00926

to receiving water

Atlantic Ocean

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 modification shall become effective on the Effective Date of Permit Modification.

This permit and the authorization to discharge shall expire at midnight, November 30, 2016.

Signed this        day of

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José C. Font,  
Acting Director  
Caribbean Environmental  
Protection Division

- m. The EQB can require that the permittee conduct bioaccumulation studies, dye studies, water quality studies or any other pertinent studies. If the EQB requires one or more of the aforementioned studies, the permittee will be notified to conduct such study(ies). One hundred twenty (120) days after the notification of the EQB, the permittee shall submit, for evaluation and approval of the EQB, a protocol to conduct such study(ies). Sixty (60) days after the EQB approval, the permittee shall initiate such study(ies). Ninety (90) days after conducting such study(ies), the permittee shall submit a report that includes the results of such study(ies) to EQB and EPA.
- n. The permittee shall conduct a dye study to verify the critical initial dilution and the plume behavior within the mixing zone. The dye study shall be conducted ninety (90) days after the written approval of the corresponding Protocol and Quality Assurance Project Plan (QAPP). Such Protocol and QAPP shall be submitted to EQB ninety (90) days after the EDP. This study shall consist of at least one set of the required samples, as established in the QAPP for a complete sampling event.
- o. The authorization for the mixing zone will not be transferable and does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, or any infringement of Federal or State laws or regulations.

20. Whole Effluent Toxicity Requirements

- a. The permittee shall conduct quarterly chronic toxicity tests on flow-weighted 24-hour composite effluent samples of the combined Bacardi, PRASA Puerto Nuevo, and PRASA Bayamón discharges (referred herein as “combined discharge”) for fertilization of *Arbacia punctulata*. Once each calendar year, the permittee shall split a 24-hour composite effluent sample and concurrently conduct acute and chronic toxicity tests using *Mysidopsis bahia* and *Cyprinodon variegatus* in addition to *Arbacia punctulata* fertilization test. The testing on this split sample, in addition to the *Arbacia punctulata* test for that quarter, would satisfy the annual toxicity monitoring requirement of Special Condition 17.

The permittee shall also conduct quarterly chronic toxicity tests on 24-hour composite effluent samples of solely the Bacardi effluent, taken at Bacardi Discharge Point 001, for fertilization of *Arbacia punctulata*.

b. Effluent Limitation:

Interim Effluent Limitation:

The following effluent limit shall be effective from the effective date of this permit condition (EDPC) through EDPC + 3 years:

**No single IC25 test result for any species or effect in the combined discharge shall be less than 1.29%.**

Final Effluent Limitation:

The following final effluent limitation shall be effective EDPC + 3 years through November 30, 2016:

**No test result for any species or effect in the combined discharge shall be greater than 83.32 TUC.**

c. TRE Workplan

No later than EDPC + 90 days, the permittee shall prepare and submit a Toxicity Reduction Evaluation (TRE) Workplan to EPA Region 2 for approval. The TRE Workplan must include, at a minimum:

- 1) A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
- 2) A description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the facility.
- 3) Potential actions to be undertaken by the permittee to investigate, identify, and correct the causes, and prevent the recurrence of toxicity.
- 4) Identification of responsible persons/parties for conducting the TRE.
- 5) Potential source reduction measures and pollution prevention opportunities to reduce toxicity.

EPA shall provide comments on such TRE Workplan no later than 30 days after the permittee's submission of the Workplan. If EPA provides such comments within that timeframe, the permittee shall respond to such comments not later than 30 days after permittee's receipt. If EPA does not provide comments within 30 days, the Workplan will be deemed approved as proposed.

d. Implementation of Toxicity Reduction Evaluation

Once the TRE Workplan is approved, if a test result for any species or effect in the combined discharge exceeds 83.32 TUC on or after EDPC, the permittee shall initiate, within 30 days of receipt of this test result, the TRE Workplan approved pursuant to paragraph c of this special condition. The TRE shall use the same species and test method as that of the observed exceedance. The TRE may be performed in conjunction with the PRASA Puerto Nuevo and Bayamón facilities. The permittee shall use the following guidance manuals:

- 1) *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA 833-B-99-002, 1999)
- 2) *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, 1989).

The permittee may also use the following manuals for Toxicity Identification Evaluation to identify the causes of toxicity:

- 3) *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005F, 1992);
- 4) *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993);
- 5) *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and
- 6) *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996).

e. Progress Reports

The permittee shall submit three annual progress reports on the TRE process. These reports shall include an inventory of actions taken, testing procedures, and results. Potential causes of synergistic toxicity shall be identified, as well as source reduction activities to address such causes. The first progress report shall be due EDPC + 1 year.

f. Test Methods

1) Acute Toxicity Testing

- A) The acute 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 shall be the *Mysidopsis bahia* (mysid shrimp) and *Cyprinodon variegatus* (sheepshead minnow). The tests shall be static renewal type.

2) Chronic Toxicity Testing

- A) The chronic toxicity tests shall be conducted in accordance with EPA publication, EPA-821-R-02-013 Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Fourth Edition, October 2002.
- B) The tests shall report the No Observable Effects Concentration (NOEC), the Low Observable Effects Concentration (LOEC), the calculated inhibition concentration of 25% (IC25), and the effects reported at each concentration tested in the dilution series. The dilution series concentrations shall be chosen to bracket the approximate expected IC25 results, in order to accurately depict the toxic effects of the sample.
- C) The chronic toxicity tests shall be fertilization of *Arbacia punctulata* (sea urchin). The tests shall be static renewal type.
- D) If either the reference toxicant or effluent toxicity tests do not meet all test acceptability criteria in the test methods manual, then the permittee must resample and retest within 14 days.

g. Reporting of Chronic Toxicity Monitoring Results

1) A procedure report shall be submitted to EPA and EQB by EDPC + 90 days. The following information shall be included in the procedure report:

- A) An identification of the organizations responsible for conducting the test and the species to be tested.
- B) 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.
- C) 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.

2) For any toxicity testing event, a full laboratory report shall be submitted and shall include: the toxicity test results in NOEC, LOEC, IC25, and the results reported at each effluent dilution. The results shall be reported according to the test methods manual chapter on report preparation and test review; the dates of sample collection and initiation of each toxicity test; all results for effluent parameters monitored concurrently with the toxicity test(s); and progress reports on TRE/TIE investigations.

3) Full laboratory reports of analytical results shall be submitted to EPA Region II and EQB within thirty (30) 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:

CHIEF, CLEAN WATER REGULATORY BRANCH  
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION II  
290 BROADWAY - 24th FLOOR  
NEW YORK, NEW YORK 10007-1866

4) The permittee shall notify the permitting authority in writing within 14 days of any violation of the chronic toxicity limitation. This notification shall describe actions the permittee has taken or will take to investigate, identify, and correct the causes of toxicity; the status of actions required by this permit; and schedule for actions not yet completed; or reason(s) that no action has been taken.

h. Reopener Clause for Toxicity Requirements

In accordance with 40 C.F.R. Parts 122 and 124, this permit may be reopened by EPA to include toxicity/treatability studies, additional effluent limitations, or other special conditions to address toxicity in the effluent or receiving water body. EPA may, upon review of technical data that supports an alternate toxicity test data evaluation method for this discharge, reopen the permit.

21. The permittee must provide a written technical evaluation of the need to revise local limits under 40 CFR 403.5(c)(1). The schedule for the providing written reports documenting the local limits technical evaluation shall not exceed:
- a. EDP + 3 months - Analysis of the maximum allowable headworks (MAHL) to the plant based on final permit limits for pollutants listed in Tables A-1. The headworks analysis must include an explanation of the removal capabilities of plant. If the removal efficiencies vary from those provided in the November 27, 2002 Local Limits report, a full justification of the rates and revised calculations for additional pass through requirements (water quality standards & sludge requirements) must also be provided;
  - b. EDP + 6 months - Local limits technical evaluation based on MAHL, domestic loading, and proposed allocation to non-domestic sources;
  - c. EDP + 9 months - Proposed revisions to local limits (if indicated by technical evaluation) & implementation plan not to exceed EDP + 12 months; and
  - d. EDP + 12 months - Include revised local limits (if indicated by technical evaluation) in permits issued to non-domestic users of the sewerage system.

As to a toxic pollutant introduced into the applicant's treatment works by an industrial discharger for which there is no applicable categorical pretreatment standard for the toxic pollutant, and the 40 CFR part 403 analysis on the toxic pollutant shows that no local limit is necessary, the applicant shall demonstrate to EPA on an annual basis during the term of the permit through continued monitoring and appropriate technical review that a local limit is not necessary, and, where appropriate, require industrial management practices plans and other pollution prevention activities to reduce or control the discharge of each such pollutant by industrial dischargers to the POTW. Such annual analysis shall be submitted by December 1. If such monitoring and technical review of data indicates that a local limit is needed, the POTW shall establish and implement a local limit by March 31 of the year following the analysis.

22. The permittee shall continue to implement its Non-Industrial Control Program.

1, 2, 3, 4, 5, 6, 7 and 8 see page 22.

## ATTACHMENT 2

### COMBINED SEWER OVERFLOW (CSO) PERMIT CONDITIONS

The permittee is authorized to discharge from the CSO outfalls listed below. The permittee shall ensure that all CSOs from the Combined Sewer System (CSS) comply with the requirements of Attachment 2, Combined Sewer Overflow (CSO) Permit Conditions, and other pertinent portions of this permit.

Outfall Number	Overflow Outfall Location	Receiving Water Body
002 Mercantil Plaza Building	18°26'05.6" 66°03'36.2"	Martín Peña Channel
003 Barriada Figueroa (intersection of San Ramón and del Carmen Street)	18°27'2.47" 66°04'34.05"	Martín Peña Channel
004 Puerta de San Juan	18°27'53.524" 66°07'11.538"	San Juan Bay
005 Paseo La Princesa Pier	18°27'54.383" 66°07'10.887"	San Juan Bay
006 Miramar (behind Cortes Industrial)	18°26'50.060" 66°05'7.551"	San Juan Bay
007 Plaza Las Américas	18°26'23.17" 66°04'54.17"	Puerto Nuevo River
008 Constitution Bridge	18°26'33.09" 66°04'43.04"	Puerto Nuevo River
009 Pavia Street	18° 26' 31.720" 66° 04' 13.290"	Martín Peña Channel
010 Del Parque Street	18° 26' 26.760" 66° 26' 26.760"	Martín Peña Channel
011 Bolívar Street	18° 26' 25.761" 66° 04' 6.970"	Martín Peña Channel
012 La Puntilla Street	18° 27' 46.927" 66° 07' 7.683"	San Juan Bay

If additional CSO outfalls are identified and confirmed during the effectiveness of this permit, this attachment shall be modified to include such outfalls and the permittee must comply with the conditions herein. If any interconnection of the permittee's collection system that cannot be eliminated and contributes flows to the Barriada Figueroa (Stop 18 Pump Station) is identified and confirmed by the permittee and EPA, this attachment shall be modified to either include as a CSO outfall such interconnection identified and confirmed or to define Barriada Figueroa (near the San Juan Natatorium), as the relevant outfall, and the permittee must comply with the conditions herein.

#### I. Effluent Limits

##### A. Technology based requirements for CSOs

The permittee shall comply with the following technology-based requirements: