

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 Broadway
New York, New York 10007-1866

**FACT SHEET
FOR
DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PERMIT TO DISCHARGE
INTO THE WATERS OF THE UNITED STATES**

NPDES Permit No. PR0000591

Name and Address of Applicant:

Bacardi Corporation
P.O. Box 363549
San Juan, Puerto Rico 00936 - 3549

hereinafter referred to as "the permittee", is authorized to discharge from the following facility:

Bacardi Corporation
State Road No. 165, Km 2.6
Industrial Area
Cataño, Puerto Rico 00632

to receiving waters named:

Atlantic Ocean

Receiving Water Classification: SC

I. LOCATION OF DISCHARGE

The above named applicant has applied for a National Pollutant Discharge Elimination System (NPDES) permit, to the U.S. Environmental Protection Agency (EPA) to discharge into the designated receiving water. The location of the discharge, Outfall 001, is described by the following U.S.G.S. coordinates:

<u>Outfall</u>	<u>Latitude</u>	<u>Longitude</u>
001	18° 27' 59"	66° 09' 30"

A map showing the location of the facility is in Attachment I.

II. DESCRIPTION OF APPLICANT'S FACILITY AND DISCHARGE

The permittee is engaged in the production of ethyl alcohol in the form of rum (SIC No. 2085). This rum is produced by the fermentation and distillation of molasses. The facility currently operates at a maximum production rate of approximately 115,000 proof gallons per day, with an average production rate of approximately 83,600 proof gallons per day. Within the last three years the permittee has modified the production process to extract more product from the raw molasses. The operation of the plant includes periods of shutdown and start up, at intervals during the year of a few months apart. Process flow diagrams for different operational scenarios are included in Attachment I.

The Bacardi Corporation Distillery is located on the coast of San Juan Bay. Waste product generated through the distillation of rum is treated by anaerobic digesters, designed to accommodate an average daily flow of 2 MGD and a maximum daily flow of 4 MGD. The permitted flow through the Bacardi outfall system is a daily maximum of 2 MGD. Bacardi has revised its operations since the issuance of the existing 2007 NPDES permit. Volume of production has decreased from previous levels, and the distillery operates approximately 143 days per year as opposed to year round operation. During shutdown periods, the treatment system is kept operational with minimal feed to maintain the biomass of the anaerobic treatment system. The flow during this period is significantly reduced to less than 10% of normal flow. This results in high bacterial concentration due to increased solids retention time in the anaerobic treatment units. The permittee has made several facility modifications since the last permit issuance. Additionally, the permittee has made several improvements to separate wastestreams and eliminate sources of bacterial contamination.

The flow of Bacardi discharge 001 is tied into a combined outfall which also discharges treated effluent from the Bayamón Regional Wastewater Treatment Plant (RWWTP) and the Puerto Nuevo RWWTP. The combined effluent is then discharged approximately 7,365 ft (2,246 m) from the shoreline into the Atlantic Ocean, at a location approximately 3,600 ft (1,097 m) north of Isla de Cabras, at a depth of 141 ft (43 m). The discharge is through a high-rate, Y-shaped diffuser consisting of two (2) legs that are each 1,010 ft (308 m) in length and a constant 84-inch diameter. The west leg of the diffuser has 100 bell-mouthed ports and the east leg of the diffuser has 102 bell-mouthed ports, each at 15 degrees from the horizontal. There are a total of 202 ports. On the west diffuser leg, there are 80 inshore ports that have a diameter of 6 in (15.2 cm), 19 offshore ports that have a diameter of 7 in (17.8 cm), and 1 10-inch (25.4 cm) port. On the east diffuser leg, there are 81 inshore ports that have a diameter of 6 in (15.2 cm), 20 offshore ports that have a diameter of 7 in (17.8 cm), and 1 10-inch port. The ports discharge on alternating sides of the diffuser and are evenly spaced at 10 ft (3.05 m) intervals. The diffuser is currently operated with all 202 ports open.

The outfall system is owned and operated by the Puerto Rico Aqueduct and Sewer Authority (PRASA) to dispose of treated effluents from the Bayamón and Puerto Nuevo RWWTPs. The Bayamón RWWTP and Puerto Nuevo RWWTP are municipal sewage treatment plants operated by the PRASA and their discharges are regulated by separate NPDES permits. The Atlantic

Ocean is classified as SC water in the Puerto Rico Water Quality Standards Regulation (PRWQSR), by the Environmental Quality Board (EQB) of the Commonwealth of Puerto Rico. A detailed description of the type and quantity of pollutants which are to be discharged is listed in the draft Permit.

The PRASA Bayamón and Puerto Nuevo RWWTPs have been granted a modification from secondary treatment requirements under Section 301(h) of the Clean Water Act. A renewal of this modification is included as part of the current renewal of the NPDES permits for those facilities. The EPA Tentative Decision Document for the modification of permits under Section 301(h) of the Clean Water Act is included as part of the administrative record for the draft permits for the PRASA Puerto Nuevo and Bayamón RWWTPs.

III. DESCRIPTION OF LIMITATIONS AND CONDITIONS

A brief summary of the effluent limitations, monitoring requirements and other conditions of the draft permit are described in Attachment II.

IV. COMMONWEALTH CERTIFICATION REQUIREMENTS

A copy of the Commonwealth's certification requirements, based upon a final Water Quality Certificate (WQC) issued by the EQB dated June 3, 2010, is provided in Attachment III. Review and appeals of limitations and conditions attributable to this certification shall be made through the applicable Commonwealth procedures and may not be made through EPA procedures.

V. OCEAN DISCHARGE CRITERIA

Section 403(c) of the Clean Water Act (the Act) and the Ocean Discharge Criteria regulations at 40 CFR Part 125, Subpart M (45 FR 65942, October 3, 1980) provide that no permit for a discharge to the territorial sea, the contiguous zone, or the ocean may be issued except in compliance with the Ocean Discharge Criteria in section 403(c) of the Act. Since the combined wastewater from the Bayamón and Puerto Nuevo RWWTPs and Bacardi discharges to the territorial sea (i.e., the Atlantic Ocean), compliance with Ocean Discharge Criteria has been evaluated as part of the permit renewal process.

Discharges from the combined outfall for the Bayamón and Puerto Nuevo RWWTPs and the Bacardi WWTP have been evaluated for impacts to the marine environment as part of the EPA's review of PRASA's applications for a section 301(h) modification from secondary treatment requirements for the Bayamón and Puerto Nuevo RWWTPs. Under 40 CFR 125.122(b), discharges in compliance with section 301(h) shall be presumed not to cause unreasonable degradation of the marine environment. The EPA has determined that the discharges from the combined outfall meet the requirements of section 301(h) and, therefore, has concluded that discharges from the combined outfall, including those from Bacardi, will not cause unreasonable degradation to the marine environment.

VI. WHOLE EFFLUENT TOXICITY

EPA has included requirements for both acute and chronic whole effluent toxicity testing, as well as an effluent limitation for chronic toxicity. A discussion of the basis for these requirements is included as Attachment IV.

VII. ENVIRONMENTAL JUSTICE

Environmental Justice (EJ) is the right to a safe, healthy, productive and sustainable environment for all, where "environment" is considered in its totality to include the ecological, physical, social, political, aesthetic and economic environments. The EPA has performed an EJ analysis for the Bacardi Corporation facility in accordance with the President's Executive Order 12898 entitled "Federal Actions to Address Environmental Justice in Minority Population and Low-Income Populations" and its regional Interim Policy for Environmental Justice. Since the Bacardi WWTP and Bayamón RWWTP share an outfall and the Community of Concern (COC), Municipality of Cataño, the EPA has prepared an EJ analysis that includes both facilities. The EPA has prepared a separate EJ analysis for the Puerto Nuevo RWWTP service area because it is in a different COC. The EJ analyses are part of the Administrative Record and are available for review upon request.

In the EJ analysis, the EPA determined that the Municipality of Cataño is an EJ community based on demographic and income information that demonstrated that the average poverty level in the Cataño exceeds the threshold average for Puerto Rico, as established in EPA Region 2's Interim Policy for Environmental Justice. In addition, the EPA determined that the potential exists for a disproportionate and/or adverse environmental burden in the Municipality of Cataño based on a higher number of facilities in Cataño that are listed in the EPA environmental databases for toxic releases than the average number of facilities island-wide. In the NPDES permitting program, the public participation process provides opportunities to address EJ concerns by providing appropriate avenues for public participation, seeking out and facilitating involvement of those potentially affected, and including public notices in more than one language where appropriate. The EPA is committed to taking all necessary actions to minimize potential adverse impacts to the Municipality of Cataño from Bacardi RWWTP. The EPA has prepared a public notice for comment on the draft permit in both English and Spanish, and will address any EJ concerns that arise during the public comment period.

VIII. PROCEDURES FOR REACHING A FINAL DECISION ON THE DRAFT PERMIT

Procedures for reaching a final decision on the permit are set forth in 40 CFR Part 124 and described in the public notice of the preparation of the draft permit. 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.

IX. ENDANGERED SPECIES ACT CONSULTATION

EPA Region 2 provides the U.S. Fish and Wildlife Service and the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration an opportunity to comment on the draft NPDES permit. Additionally, an Endangered Species Act consultation with these services is conducted by PRASA for the combined outfall. EPA Region 2 has included a reopener clause in the permit to allow for the permit to be reopened in the event that consultation leads to permit requirements to protect threatened or endangered species.

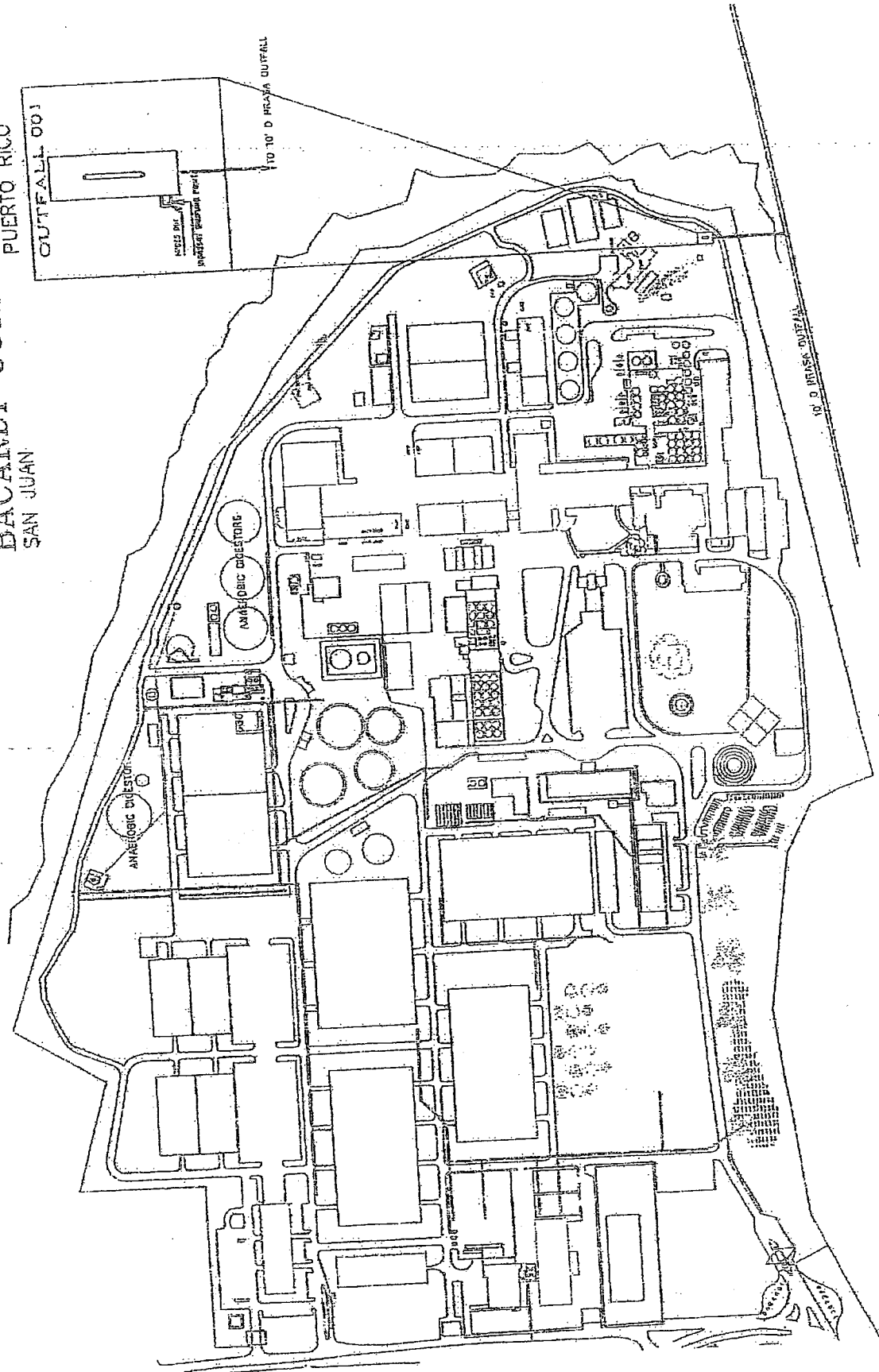
X. EPA CONTACT

Additional information concerning the draft permit may be obtained between the hours of 8:00 A.M. and 4:30 P.M., Monday through Friday from the permit writer:

Ms. Karen O'Brien, P.E.
National Pollutant Discharge Elimination System Section
U.S. Environmental Protection Agency, Region 2
290 Broadway, 24th Floor
New York, New York 10007-1866
(212) 637-3754

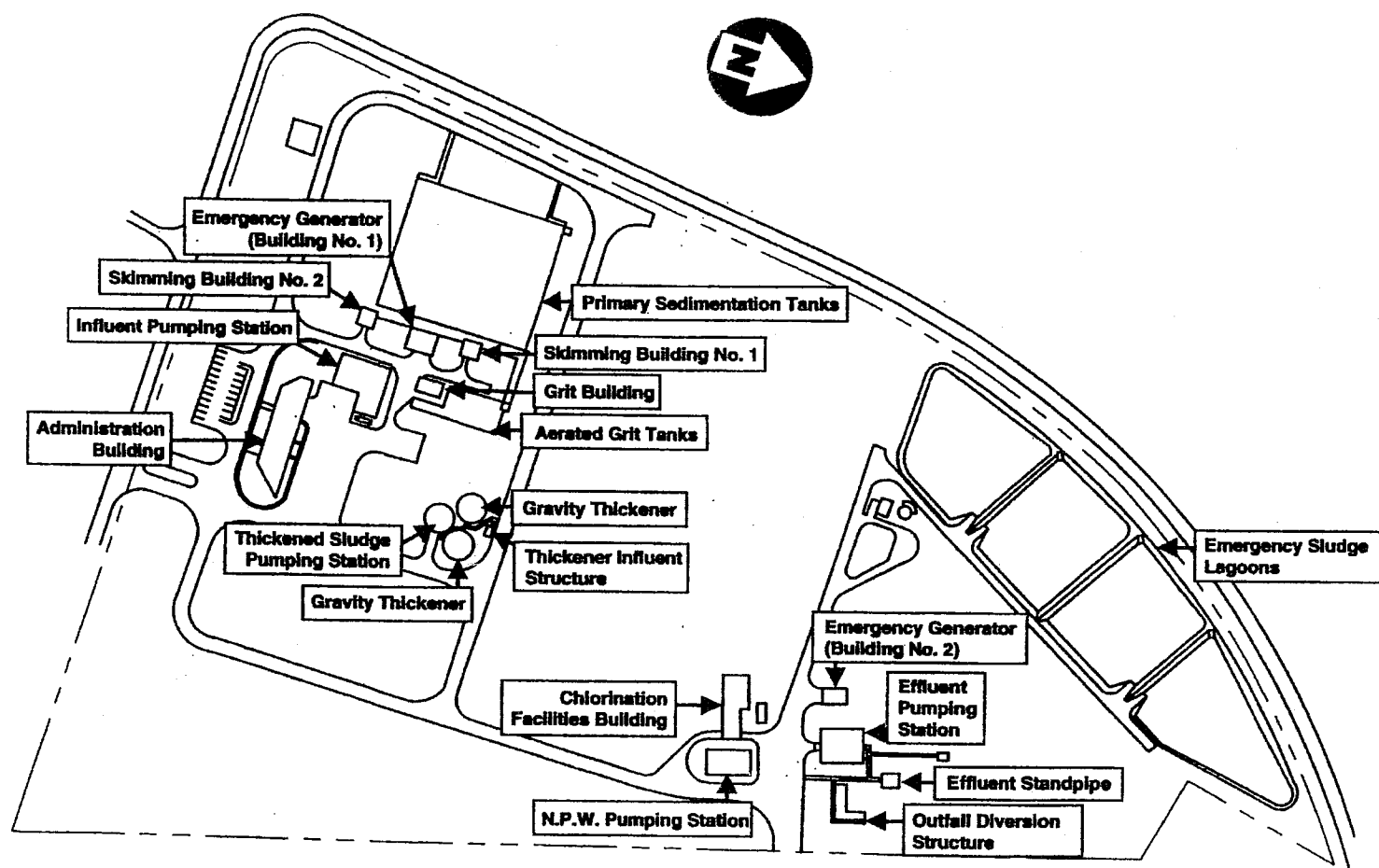
ATTACHMENT 1: SITE LOCATION AND PROCESS DIAGRAMS

BACARDI CORPORATION
PUERTO RICO
SAN JUAN

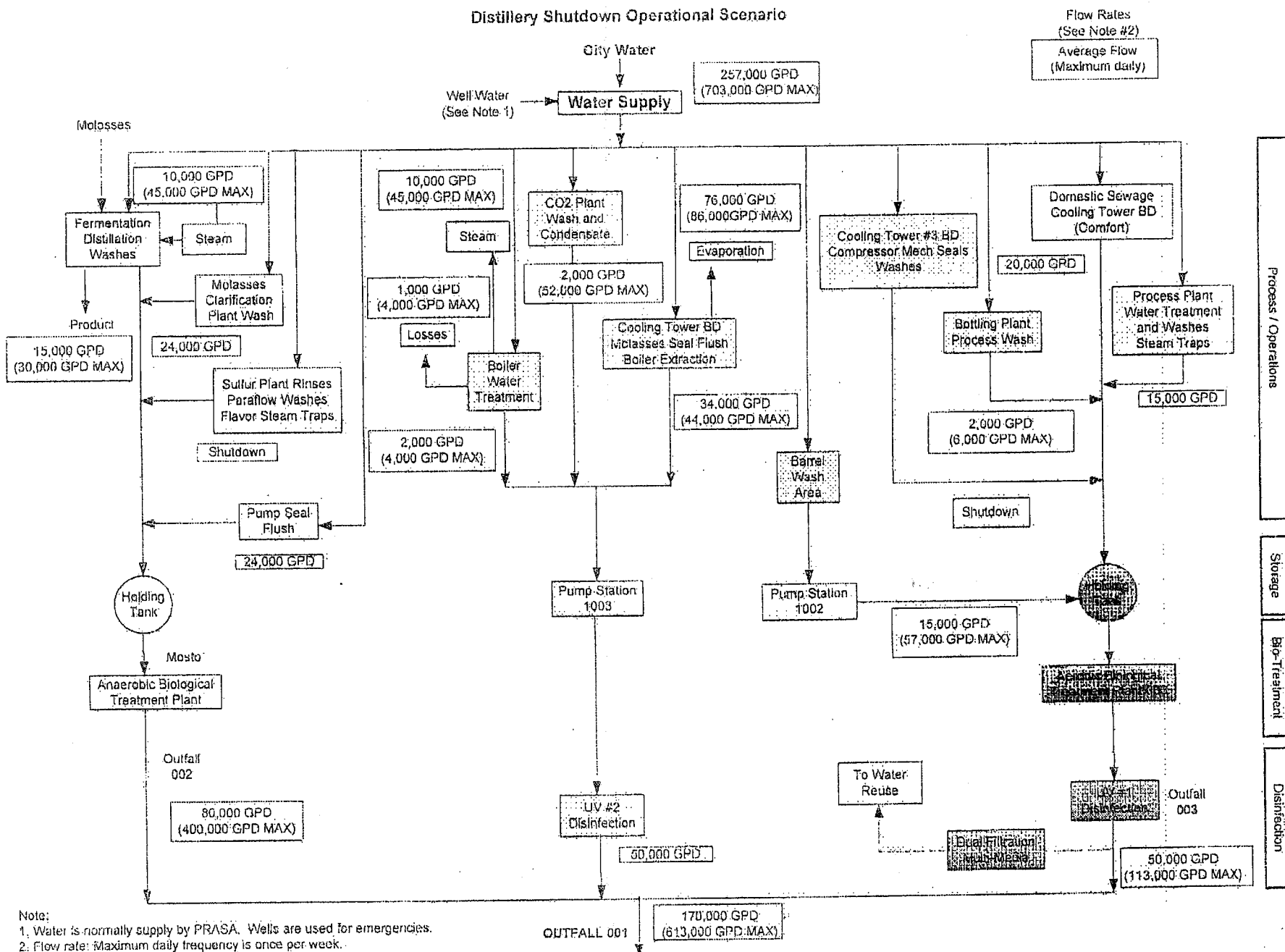


The diagram illustrates the layout of a wastewater treatment plant with the following components and flow paths:

- Influent Pumping Station**: Receives incoming wastewater.
- Skimming Building No. 2**: Processes floating debris.
- Skimming Building No. 1**: Further processing of floating debris.
- Grit Building**: Removes grit and sand.
- Aerated Grit Tanks**: Further treatment of grit.
- Gravity Thickener**: Thickens sludge.
- Thickener Influent Structure**: Distributes influent to the thickener.
- Thickened Sludge Pumping Station**: Pumps thickened sludge.
- Chlorination Facilities Building**: Treats effluent with chlorine.
- Effluent Pumping Station**: Pumps treated effluent.
- Effluent Standpipe**: Monitors effluent level.
- Outfall Diversion Structure**: Diverts effluent to the outfall.
- Emergency Sludge Lagoons**: Store sludge in case of emergencies.
- Emergency Generator (Building No. 1)**: Provides backup power.
- Emergency Generator (Building No. 2)**: Provides backup power.
- Administration Building**: Houses plant management.
- N.P.W. Pumping Station**: Provides water for the plant.



Distillery Shutdown Operational Scenario



ATTACHMENT II

DESCRIPTION OF LIMITATIONS AND CONDITIONS

The effluent limitations, monitoring requirements, and other conditions of this permit are described in the draft permit. The effluent limitations in the permit are equivalent to the most stringent values specified in the applicable technology based guidelines or water quality based limitations. The anti-backsliding decisions are made in accordance with EPA Region 2 Antibacksliding Policy and the provisions of Clean Water Act §402(o).

Water Quality-Based Limits

Bacardi Discharge Outfall 001: Treated process, sanitary, utility, and miscellaneous wastewater.

EPA has based the water quality-based limitations for this permit on the final Water Quality Certificate (WQC) issued by the Puerto Rico Environmental Quality Board (EQB), dated June 3, 2010, pursuant to Section 401(d) of the Clean Water Act. Pursuant to the Water Quality Certification, EPA has established effluent limitations for the following parameters at Bacardi facility Outfall 001: Biochemical Oxygen Demand (BOD₅); Cadmium; Color; Copper; Dissolved Oxygen; Enterococci; Fecal Coliforms; Flow; Lead; Mercury; Nickel; Nitrogen; Oil and Grease; pH; Radioactive Materials; Silver; Solids and Other Matter; Sulfide (undissociated H₂S); Surfactants as Methylene Blue Activate Substances (MBAS); Suspended, Colloidal or Settleable Solids; Taste and Odor Producing Substances; Temperature; Thallium; Turbidity; and Zinc.

The permittee, in a joint request with the Puerto Rico Aqueduct and Sewer Authority (PRASA), requested a mixing zone for the combined discharge for the Bacardi and PRASA Puerto Nuevo RWWTP and Bayamón RWWTP. As part of the Water Quality Certification, EQB has defined a mixing zone for the following parameters: Cadmium, Color, Copper, Free Cyanide, Dissolved Oxygen, Enterococci, Fecal Coliforms, Lead, Mercury, Nickel, Nitrogen, pH, Silver, Sulfide, Surfactants, Temperature, Thallium, Turbidity, and Zinc.

Water quality-based effluent limitations included in the WQC incorporate the revised Critical Initial Dilution (CID) factor of one hundred and two (102) that was presented in the Mixing Zone Application for the Bayamón/Puerto Nuevo Regional Wastewater Treatment Plants and Bacardi Corporation Wastewater Treatment Plant Outfall System (January 2010). Where there are instances of a less stringent water quality based limitation than in the previous permit, it is the result of a calculation based on the approved mixing zone and the allowable discharge that will not cause or contribute to a violation of water quality standards at the edge of the mixing zone. Clean Water Act §402(o) and EPA Region 2 Antibacksliding Policy allow relaxation of effluent limitations if new information is available that was not available at the time of issuance for the previous permit. The final water quality certificate issued by the EQB on June 3, 2010 includes a bacterial mixing zone for fecal coliform and enterococcus, based on the January 2010 mixing zone application referenced above, which included new data,

calculations, and improvements to the facility to address sources of the bacteria. As such information was not available at the time of the last permit issuance, and EPA is only relaxing limits to the level of existing effluent quality, the relaxation of bacterial limits is consistent with EPA Region 2 Antibacksliding Policy.

EPA may impose more stringent limitations and conditions, as well as include clarifying addendums to the EQB WQC. Such cases are noted below.

Suspended, Colloidal, or Settleable Solids

A footnote (#) was added in Table A-1 under the parameter Suspended, Colloidal, or Settleable Solids to clarify that testing for these parameters should be conducted for Settleable Solids.

Special Condition 5: Sulfide (Undissociated H₂S)

The Final WQC issued by EQB includes an effluent limitation and monitoring requirement for sulfide (undissociated H₂S). The Final WQC does not specify an analytical method for sulfide (as undissociated H₂S) in Special Condition No. 5 of the WQC, only that an approved EPA analytical method must be utilized that achieves the lowest possible detection level. EPA has included footnote "@" for sulfide in Table A.1 of the draft permit which specifies the methodology that must be used for calculating undissociated H₂S from the dissolved Sulfide concentration and clarification to Special Condition No. 5 for reporting sulfide (undissociated H₂S) concentrations when sample results are below detection limits.

Bacterial Limitations

EPA has retained the interim limitations for bacterial parameters (Enterococci, Fecal Coliforms) that are currently applicable to the discharge based on existing effluent quality limits proposed in the draft 2011 EPA and Bacardi Corporation Consent Decree modification to the 2008 Consent Decree with the Bacardi Corporation (*U.S. v Bacardi Corporation*, Civil Action No. 3:08-cv-1825).

These limitations are more stringent than those included as part of the EQB WQC. These limitations are achievable by the permittee during normal operational conditions. While EPA notes the mixing zone approved in the EQB water quality certificate dated June 3, 2010, publicly owned treatment works (POTWs) and industrial facilities should be held to the level of discharge achievable through treatment rather than assume all assimilative capacity of the receiving water, particularly for bacterial parameters.

Given the difficulty the permittee has encountered with bacterial levels when resuming operations following periods of shutdown, EPA proposes to apply the higher EQB limitations solely for the three week period following start-up of operations. Due to the variability in operations, EPA has included a weekly sampling requirement for fecal coliform and enterococcus, which is more frequent than the monthly sampling included in the EQB water quality certificate.

Whole Effluent Toxicity

EPA has included an effluent limitation for Whole Effluent Toxicity (WET) for the combined discharge of the Bacardi, and PRASA Bayamón RWWTP and Puerto Nuevo RWWTP. WET monitoring requirements have also been included for the combined discharge and the discharge 001 from the Bacardi facility. Similar monitoring requirements have been incorporated into the NPDES permits for the PRASA Bayamón RWWTP and Puerto Nuevo RWWTP. A detailed discussion of WET requirements is included as Attachment IV to this fact sheet.

Technology-Based Limits

Discharge Outfall 002:

The limitations for mass loading of BOD₅ and TSS from the previous permit have been retained. For BOD Percent Removal, EPA calculated the percentage remaining from the percentage removed (100 - % removal), and performed an EEQ analysis on those results. This resulted in a 95th Percentile EEQ value for Monthly Average Percent Removal BOD of 71.7%.

EPA has also retained the Quarterly Average Percent Removal requirement, based on weekly sampling results. The averaging over a quarter of weekly results will reduce the impact of the retention time lag in comparing influent to effluent results. EPA has retained the minimum quarterly average limit of 70%. Falling below this minimum value will trigger a requirement to demonstrate to EPA that the lower percentage removal observed was due solely to lower loading amounts flowing into the anaerobic treatment system.

Discharge Outfall 003:

BOD₅ - The 30-day average effluent limitation and the 30-day average percent removal limitation in the draft permit are technology based BCT (Best Conventional Pollutant Control Technology) limits based on Best Professional Judgement (BPJ) using the Effluent Limitations Guidelines (ELG) for secondary treatment described in 40 CFR §133.102(a)(1) and (3), respectively. These limitations are equal to or more stringent than the existing NPDES permit in accordance with the antibacksliding requirements in 40 CFR § 122.44(l). Both the 30-day average limit and the daily maximum limit are included to ensure compliance with secondary treatment requirements.

Total Suspended Solids - The 30-day average and 7-day average effluent limitations and the 30-day average percent removal limitation are technology based BCT (Best Conventional Pollutant Control Technology) limits based on Best Professional Judgement (BPJ) using the Effluent Limitations Guidelines (ELG) for secondary

Name of Preparer: Karen O'Brien
Date: May 31, 2011

Permit No. PR0000591
Page 4 of 3 Pages

treatment described in 40 CFR § 133.102(b)(1) and (3), respectively. These limitations are equal to or more stringent than the existing NPDES permit in accordance with the antibacksliding requirements in 40 CFR § 122.44(l).

Permit Expiration: This permit is being issued for a term of five years.

General Conditions: These conditions apply to all permits as required by 40 CFR Part 122.41.

ATTACHMENT III

RETURN RECEIPT REQUESTED

June 3, 2010

Julio Torreulla, P.E.
Environmental and Safety Director
Bacardí Corporation
P.O. Box 363549
San Juan, Puerto Rico 00936-3549

Dear engineer Torruella:

**Re: Modified Water Quality Certificate
and Authorize an Interim Mixing Zone (IMZ)
Bacardí Corporation
State Road No. 165, Km. 2.6
Industrial Area
Cataño, Puerto Rico
NPDES No. PR0000591**

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 (PRWQSR), as amended and in Sections 208(e), 301, 302, 303, 304(e), 306 and 307 of the Act, it is certified that there is reasonable assurance as determined by the Environmental Quality Board (EQB) 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 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 301 (b) (1) (C) of the Act.

Julio Torruella, P.E.
WQC Bacardí Corporation
NPDES No. PR0000591
Page 6

Attachment III
EQB Final Water Quality Certificate

If you have any objection to the Water Quality Certificate (WQC), you have the right to request reconsideration to the EQB within the statutory period (twenty (20) calendar days from the date that the WQC is received).

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

Angel O. Berrios Silvestre, P.E.
Associate Member

Wanda E. García Hernández
Alternate Member

Pedro J. Nieves Miranda, Esq.
Chairman

c: Ms. Michelle Josilo, EPA-Region 2

SPECIAL CONDITIONS

NPDES No. PR0000591

These special conditions are an integral part of the Water Quality Certificate (WQC) and shall be incorporated into the NPDES permit in order to satisfy the provisions of Section 301(b)(1)(C) 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 7,570.80 m³/day (2.0 MGD) as daily maximum. No increase in flow shall be authorized without a recertification from the Puerto Rico Environmental Quality Board (EQB). ^{1,4,5}
2. 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. ^{1,2}
3. The samples taken for the analysis of 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 Section 6.2.3 of the Puerto Rico Water Quality Standards Regulation (PRWQSR), as amended. ⁴
4. All sample collection, preservation, and analysis shall be carried out in accordance with the Code of Federal Regulation (CFR) Number 40, 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 licensed microbiologist or a medical technician authorized to practice the profession in Puerto Rico. ^{1,3}
5. The permittee shall use the approved EPA analytical method, with the lowest possible detection limit, in accordance with 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 approved EPA method established in the 40 CFR Part 136, then, the concentration of undissociated H₂S should be reported as "below detection limit". ^{2,3}
6. The solid wastes (sludge, screenings and grit) generated due to the treatment system operation 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 body of water or soil. In the event of a spill of solid waste on land or into a body of water, 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.

These notifications shall include the following information:

- a) Spill material
- b) Spill volume
- c) Measures taken to prevent the spill material to gain access to any body of water

This special condition does not relieve the permittee from its responsibility to obtain the corresponding permits from the EQB's Solids Wastes Program and other state and federal agencies, if any. ^{4,6}

7. A log book should 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 offers the service.

A copy of the Non-Hazardous Solid Waste Collection and Transportation Service Permit issued by the authorized official from the EQB should be attached to the log book. ³

8. The sludge produced within the facility due to the operation of the treatment system shall be analyzed and all constituents shall be identified as required by "Standards for the Use or Disposal of Sewage Sludge" (CFR Number 40, Part 503). The sludge shall be disposed properly in such manner that water pollution or other adverse effects to surface waters or to ground water do not occur. ^{4,6}
9. If any standard or prohibition to the sanitary sludge disposal is promulgated and said prohibition or standard is more stringent than any condition, restriction, prohibition or standard contained in the NPDES permit, such permit shall be modified accordingly or revoked and reissued to be adjusted with regard to such prohibition or standard. ⁶
10. No changes in the design or capacity of the treatment system will be permitted without the previous authorization of EQB. ⁵
11. Prior to the construction of any additional treatment systems or prior to the modification of the existing one, the permittee shall obtain the approval of the engineering report, plans and specifications from EQB. ⁵
12. 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. ^{1,4}
13. The flow measurement 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. ^{4,5}
14. The sampling point for discharge 001 shall be located immediately after the primary flow measuring device of the effluent of facility.
15. The sampling point for discharge 001 shall be labeled with a 18 inches x 12 inches (minimum dimensions) sign that reads as follows:

"PUNTO DE MUESTREO PARA LA DESCARGA 001"

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

17. The EQB has defined and authorized a Mixing Zone (MZ) pursuant to Article 5 of the PRWQSR. ³

- a. The MZ is delineated by the following points (See Diagram-I):

Geographic Coordinates *

Point 1	Lat. 18° 29.181' Long. 66° 08.518'
Point 2	Lat. 18° 29.202' Long. 66° 08.503'
Point 3	Lat. 18° 29.100 Long. 66° 08.340'
Point 4	Lat. 18° 29.097' Long. 66° 08.150'
Point 5	Lat. 18° 29.072' Long. 66° 08.150'
Point 6	Lat. 18° 29.075' Long. 66° 08.348'

* NAD 83 State Plane Coordinates

The diffuser configuration is a one hundred twenty (120) degree "Y" type consisting of two (2) legs of one thousand ten (1,010) feet long and a constant diameter of eighty four (84) inches. A total of one hundred two (102) ports along each diffuser's leg shall be opened. There are twenty (20) ports of seven (7) inches at the end of each diffuser's leg and eighty two (82) ports of six (6) inches between the "Y" split and the larger ports at the end of each diffuser's leg. The ports discharge in alternate directions at a constant spacing of ten (10) feet.

b. The MZ is defined for the following parameters:

<u>Parameter</u>	<u>Daily Maximum Discharge Limitation at Outfall Serial Number 001</u>	<u>Daily Maximum Limitation at the Borders of the MZ</u>
Cadmium (Cd) (µg/l)	30.90	8.85
Color (Pt-Co)	84,000	Ω
Copper (Cu) (µg/l)	3,293	3.73
Cyanide, Free (CN) (µg/l)	47	1.0
Dissolved Oxygen (mg/l)	Monitoring Only	≥4.0
Enterococci (col/100 ml)	382,602 ‡	*
Fecal Coliforms (col/100 ml)	803,378 ‡	**
Lead (Pb) (µg/l)	60.8	8.52
Mercury (Hg) (µg/l)	0.68	0.051
Nickel (Ni) (µg/l)	412	8.28
Nitrogen (NO ₂ , NO ₃ , NH ₃) (mg/l)	847.700	5.000
pH (SU)	6.0 - 9.0	7.3 - 8.5
Silver (Ag) (µg/l)	30.4	2.24
Sulfide (µg/l) (undissociated H ₂ S)	89,007	2
Surfactants (MBAS) (µg/l)	1,494	500
Temperature °F (°C)	107.6 (42)	8
Thallium (Tl) (µg/l)	45.8	0.47
Turbidity (NTU)	9,244	10
Zinc (Zn) (µg/l)	3,213.00	85.62

‡ The geometric mean of a series of representative samples (at least five samples) of the water taken sequentially in a given instance.

* The enterococci density in terms of geometric mean of at least 5 representative samples taken sequentially shall not exceed 35/100 ml. No single sample should exceed the upper confidence limit of 75%

¹² The color at the edge of the mixing zone shall not exceed the color of the receiving water body.

8 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).

using 0.7 as the log standard deviation until sufficient site data exist to establish a site-specific log standard deviation.

** The Fecal Coliforms geometric mean of a series of representative samples (at least five samples) of the water taken sequentially in a given instance shall not exceed 200 colonies/100 ml. Not more than 20 percent of the samples shall exceed 400 colonies/100 ml.

- c. The permittee shall conduct annually definitive acute and chronic toxicity tests using the organisms Mysidopsis bahia, Cyprinodon variegatus and Arbacia punctulata for the wastewater discharge identified as 001.
- d. The toxicity test shall be conducted according to the most recent editions of the following publications of EPA:
 - 1) Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, (EPA-821-R-02-012) Fifth Edition, October 2002.
 - 2) Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, (EPA-821-R-02-013) Fourth Edition, October 2002.
- e. The procedures, methods, techniques, conditions, etc., included in the above mentioned publications shall be followed at all times. If the permittee wants to use other procedures, methods, etc., because he understands that:
 - 1) by the nature or conditions of this case is impossible to follow such publications;
 - 2) other procedures, methods, etc., are adequate;then the permittee shall, prior to the utilization of other procedures, methods, etc., obtain the EPA and EQB written approval for their usage.
- f. The effluent samples for the toxicity tests shall be used in or before 36 hours after being collected.

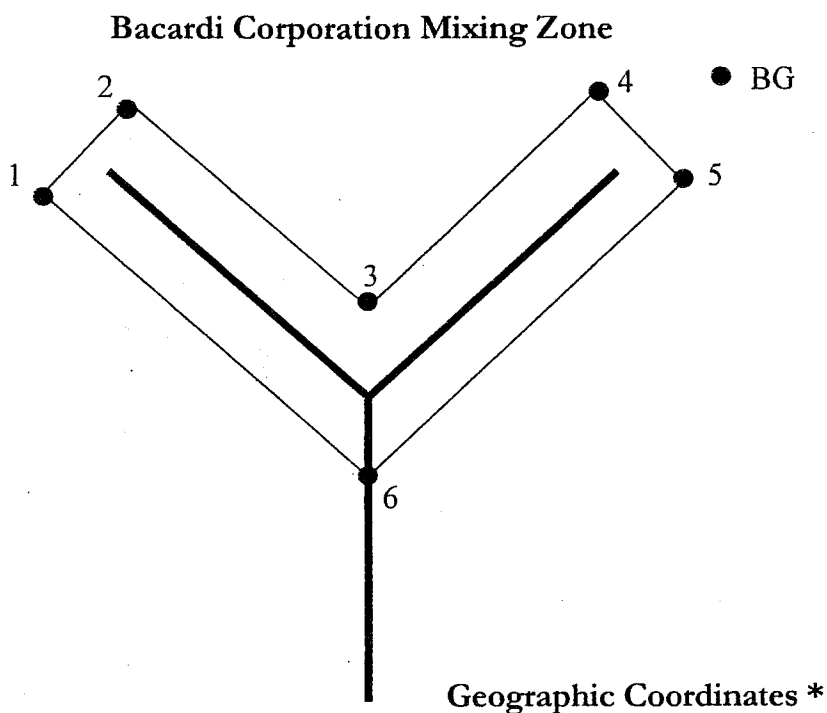
- g. A report on the toxicity tests conducted shall be submitted to the EQB, during the sixty (60) days period after the tests were conducted. This report shall be prepared according to the aforementioned publications of EPA.
- h. Based on the review of the test results, the EQB can require additional toxicity tests, including toxicity/treatability studies and can revoke the final mixing zone authorization according with Section 5.14 of the PRWQSR.
- i. Solids from wastewater sources shall not cause deposition in, or be deleterious to, the designated uses of the waters.
- j. The discharge shall not cause the growth or propagation of organisms that negatively disturb the ecological equilibrium in the areas adjacent to the mixing zone.
- k. The mixing zone shall be free of debris, scum, floating oil and any other substances that produce objectionable odors.
- l. The permittee shall maintain in good operating conditions the discharge system [discharge outfall (land and submarine), diffuser, ports, etc.]. At least once a year, the discharge system shall be inspected to determine if some repairs, replacing, etc., on the discharge system is required. A report of such inspections shall be submitted to EPA and EQB not later than sixty (60) days after the performance of the inspection.
- m. The EQB, can require that the permittee conduct bioaccumulation studies, dye studies, water quality studies or any other pertinent studies. If the EQB require one or more of the aforementioned studies, the permittee will be notified to conduct such study(ies). One hundred and 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).
- 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 it authorizes any injury to persons or property or invasion of other private rights, of any infringement of Federal or State Law or Regulations.
- 19. The conditions of this Water Quality Certificate (WQC) are 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. ⁴
- 20. The EQB, by the issuance of the WQC, does not relieve the applicant from its responsibility to obtain additional permits or authorizations from the EQB 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. ⁵

1, 2, 3, 4, 5, 6 and 7 see page 10

DIAGRAM-I



Point 1	Lat. 18° 29.181' Long. 66° 08.518'
Point 2	Lat. 18° 29.202' Long. 66° 08.503'
Point 3	Lat. 18° 29.100 Long. 66° 08.340'
Point 4	Lat. 18° 29.097' Long. 66° 08.150'
Point 5	Lat. 18° 29.072' Long. 66° 08.150'
Point 6	Lat. 18° 29.075' Long. 66° 08.348'

* NAD 83 State Plane Coordinates.

1. According to Article 1, Puerto Rico Water Quality Standards Regulation as Amended.
2. According to Article 3, Puerto Rico Water Quality Standards Regulation as Amended.
3. According to Article 5, Puerto Rico Water Quality Standards Regulation as Amended.
4. According to Article 6, Puerto Rico Water Quality Standards Regulation as Amended.
5. According to the Environmental Public Policy Act of September 22, 2004, Act No. 416, effective since March 22, 2005.
6. According to the Section 405(d)(4) of Federal Clean Water Act, as amended (33 U.S.C. 466 *et seq.*).
7. According to the Code of Federal Regulation Number 40 (40 CFR), Part 131.40, as amended (Federal Register/Volume 69, No. 16/Monday, January 26, 2004).

TABLE A-1 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS NPDES NO. PR0000591

During the period beginning on EDP and lasting through EDP + 5 years the permittee is authorized to discharge from outfall serial number 001 the combined wastewaters described at the final of this Table. Such discharge shall be limited and monitoring by the permittee as specified below:

Receiving Water Name and Classification: Atlantic Ocean, SC

<u>Effluent Characteristics</u>	<u>Gross Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Monthly Average	Daily Maximum	Measurements Frequency	Sample Type
BOD ₅ (mg/l) ^{1,2,3,4} α		17,700	Monthly	Composite
Cadmium (Cd) (μg/l) ^{2,3,4}		30.90	Monthly	Grab
Color (Pt-Co Units) ^{2,3,4}		84,000	Monthly	Grab
Copper (Cu) (μg/l) ^{2,3,4}		3,293	Monthly	Grab
Cyanide, Free (CN) (μg/l) ^{2,3,4} β γ		47	Monthly	Grab
Dissolved Oxygen (mg/l) ^{1,2,3,4}		----	Daily	Grab
Enterococci (colonies/100 ml) ^{1,2,4,7}		382,602 ‡	Monthly	Grab
Fecal Coliforms (colonies/100 ml) ^{1,2,4,7}		803,378 ‡	Monthly	Grab
Flow m ³ /day (MGD) ^{4,5}		7,570.80 (2.0)	Continuous Recording	

TABLE A-1 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS NPDES NO. PR0000591

Receiving Water Name and Classification: Atlantic Ocean, SC

<u>Effluent Characteristics</u>	<u>Gross Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Monthly Average	Daily Maximum	Measurements Frequency	Sample Type
Lead (Pb) ($\mu\text{g/l}$) ^{2,3,4}		60.8	Monthly	Grab
Mercury (Hg) ($\mu\text{g/l}$) ^{2,3,4} γ		0.68	Monthly	Grab
Nickel (Ni) ($\mu\text{g/l}$) ^{2,3,4}		412	Monthly	Grab
Nitrogen (NO_3 , NO_2 , NH_3) (mg/l) ^{2,3,4}		874.700	Monthly	Grab
Oil and Grease (mg/l) ^{2,4}	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) ^{2,3,4}	Shall always lie between 6.0 – 9.0.		Daily	Grab
Radioactive Materials (picocuries/l) ^{2,4}	----		ϕ	Grab
Silver (Ag) ($\mu\text{g/l}$) ^{2,3,4}		30.4	Monthly	Grab

TABLE A-1 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS NPDES NO. PR0000591

Receiving Water Name and Classification: Atlantic Ocean, SC

<u>Effluent Characteristics</u>	<u>Gross Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Monthly Average	Daily Maximum	Measurements Frequency	Sample Type
Solids and Other Matter ^{2,4}	The water of Puerto Rico shall not contain floating debris, scum and other floating materials attributable to discharges 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) ^{2,3,4} 8		89,007	Monthly	Grab
Surfactants (as Methylene Blue Activate Substances) (µg/l) ^{1,2,3,4}		1,494	Monthly	Grab
Suspended, Colloidal or Settleable Solids (ml/l) ^{1,2,4}	Solids from wastewater sources shall not cause deposition in, or be deleterious to, the designated uses of the waters.		Daily	Grab
Taste and Odor-producing Substances ^{2,4}	Shall contain none in amounts that will render any undesirable taste or odor to edible aquatic life.		----	----
Temperature °F (°C) ^{2,4}		107.6 (42)	Daily	Grab
Thallium (Tl) (µg/l) ^{2,3,4}		45.8	Monthly	Grab

TABLE A-1 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS NPDES NO. PR0000591

Receiving Water Name and Classification: Atlantic Ocean, SC

<u>Effluent Characteristics</u>	<u>Gross Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Monthly Average	Daily Maximum	Measurements Frequency	Sample Type
Turbidity (NTU) ^{2,3,4}		9,244	Monthly	Grab
Zinc (Zn) (µg/l) ^{2,3,4}		3,213.00	Monthly	Grab
Special Conditions	See attached sheet, which contains special conditions that constitute part of this certification.			

Notes:

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%.

The wastewaters to be discharged from BC, through the discharge point 001 are the following:

- | | |
|--|--|
| a. boiler blowdown, wash and extraction | j. fermentation floor drains |
| b. mosto (distillation and fermentation) | k. distillery floor drains |
| c. clarification plant wash | l. barrel wash |
| d. cooling towers blowdowns and other | m. cooling tower # 3 blowdown and washes |
| e. flavor steam traps | n. pump seals (anaerobic filters) |
| f. sulfur plant rinses and condensate | o. CO ₂ plant condensate and washes |
| g. bottling plant wash | p. sanitary plant (discharge 003) |
| h. process washes | q. process water treatment steam traps |
| i. molasses unloading and seal flush | |

TABLE A-1 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS NPDES NO. PR0000591

Receiving Water Name and Classification: Atlantic Ocean, SC

- 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 Section 6.2.3 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 EQB's written approval of the Quality Assurance Project Plan (QAPP). The QAPP must be submitted for evaluation and approval of EQB no later than thirty (30) days after the EDP. The results of the monitoring program shall be submitted to EQB and EPA-Region II 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 these parameters. In such case the WQC will be reopened to include the applicable effluent limitation if considered necessary.
 - α The effluent limitation for BOD₅ is based on the Mixing Zone Application for the PRASA and Bacardí Corporation, after determining that there is a reasonable assurance that this limit will not cause violations to the water quality standard for Dissolved Oxygen for Class SC.
 - γ See Special Condition 3.
 - β The samples shall be analyzed using the method approved by EPA in letter of February 20, 2007.
 - ‡ The geometric mean of a series of representative samples (at least five samples) of the water taken sequentially in a given instance.
 - δ See Special Condition 5.
- 1, 2, 3, 4, 5, 6 and 7 see page 10 of Special Conditions

ATTACHMENT IV

Whole Effluent Toxicity Requirements

Rule 1303.1(I) of PRWQS provides that all waters of Puerto Rico shall not contain any substance 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. This is generally referred to as a narrative water quality criterion "no toxics in toxic amounts". PRWQS do not provide a numeric criterion for toxicity. Since controls on individual pollutants may not always adequately protect water quality, toxicity testing is used to assess and control whole effluent toxicity (WET) which is necessary to reduce or eliminate the toxic impact of the effluent and meet narrative water quality criteria (54 FR 23868, June 2, 1989). NPDES regulations define WET as the whole or aggregate toxic effect of an effluent measured directly by a toxicity test.

Pursuant to the current modified permits, PRASA is required to conduct acute and chronic WET testing on the combined effluent and chronic only WET testing on individual effluent samples from the Bayamón RWWTP, Puerto Nuevo RWWTP, and the Bacardi WWTP. Since 2007, PRASA has conducted four acute WET monitoring events for the combined effluent using the mysid shrimp (*Mysidopsis bahia*) and sheepshead minnow (*Cyprinodon variegatus*) and 11 chronic WET monitoring events using these WET test species and the sea urchin (*Arbacia punctulata*). Five of the most recent 11 chronic WET monitoring events also included testing on individual effluent using the sea urchin. Since effluent toxicity is inversely related to the effect concentration (the lower the effect concentration, the higher the toxicity in the effluent), WET test data are typically expressed as toxic units (TUs) to better illustrate the magnitude of potential toxicity. Rule 1301.1 of PRWQS defines acute TU (TU_a) and chronic TU (TU_c) values as the Lethal Concentration (LC₅₀) of the tested effluent at which 50 percent of the test organisms die, where $TU_a = 100 \div LC_{50}$; and the No Observed Effect Concentration (NOEC), where $TU_c = 100 \div NOEC$, respectively.¹ To assess WET test data, EPA recommends a criterion maximum concentration (CMC) of 0.3 TU_a and criterion continuous concentration (CCC) of 1.0 TU_c be used to ensure aquatic life protection against toxicity in the receiving water. For the purpose of the section 301(h) evaluation, EPA determined the maximum allowable level of effluent toxicity or wasteload allocation (WLA) at the edge of the mixing zone that would still ensure attainment of water quality criteria for toxicity. With consideration of dilution and CMC and CCC values, EPA calculated acute and chronic WLAs of 30.6 TU_a and 102 TU_c, respectively, and then compared the WLAs to effluent WET test data.

A comparison of acute and chronic WET test data and WLAs is presented in Appendix A of EPA's 2011 Decision Document for the Bayamón and Puerto Nuevo RWWTPs. For the combined effluent, no acute toxicity was observed although several chronic WET tests reported TU_c values based on the NOEC that exceeded the chronic WLA. Of the 30 chronic WET tests

¹ The NOEC is the highest tested effluent concentration (in percent effluent) that does not cause an adverse effect on the test organism (i.e., the highest effluent concentration at which the values for the observed responses are not statistically different from the control).

conducted on the combined effluent since 2007, 30 percent (or 10 tests) resulted in TUc values that exceeded the 102 TUc WLA. All of these tests were conducted on the sea urchin and 60 percent of them were conducted in May 2007. When compared to the permit limitation of 1.00 percent effluent or 100 TUc derived from the IC₂₅, or the inhibition concentration at which a 25 percent effect occurs, no chronic toxicity is demonstrated. Based on the NOEC pursuant to PRWQS, since these tests were conducted on the combined effluent it is difficult to distinguish whether effluent from one facility or all was contributing to toxicity in these tests. In 2009, PRASA and the Bacardi Corporation began conducting chronic WET testing on individual samples of effluent from each facility in addition to the combined effluent. Between 2009 and 2011, five chronic WET tests using the sea urchin were conducted and results showed no toxicity observed in terms of the NOEC for the combined effluent but showed repeated toxicity in effluent samples from the Bacardi RWWTP. This may suggest that toxicity demonstrated in tests of combined effluent prior to 2009 may be attributed to effluent from the Bacardi WWTP. Nevertheless, nine WET monitoring events have been conducted since May 2007 and only one has demonstrated chronic toxicity on the combined effluent. Also no acute or chronic toxicity has been observed in effluent from the Bayamón RWWTP and only one effluent sample from the Puerto Nuevo RWWTP showed chronic toxicity.

Based on review of WET data, in accordance with 40 CFR 122.44(d)(v), EPA has determined that the combined discharge will cause, has the reasonable potential to cause, or contributes to an excursion above the narrative criterion for chronic toxicity and has proposed effluent limitation for the combined discharge. With consideration of dilution, EPA has proposed a maximum daily effluent limitation of 83.32 TUc (or 1.2% effluent) for chronic toxicity in the draft modified permits for the Bayamón RWWTP, Puerto Nuevo RWWTP, and Bacardi WWTP. EPA believes that the combined discharge will meet this effluent limitation upon permit issuance.

In addition to the limitation, EPA has included other toxicity testing requirements on the individual effluents from these three facilities, as these effluents combine prior to discharge. The toxicity observed in the effluent may be the result of toxicity in one or more of the discharges, or it may be the result of synergistic effects that occur when the effluents combine prior to discharge. The contemporaneous testing on each of the effluents from these facilities will provide an indication as to the source of any toxicity observed in the combined discharge.

EPA is also requiring that all three dischargers develop plans for a toxicity reduction evaluation (TRE) within the first six months of the permit term. The three dischargers may coordinate and develop one plan to meet the permit requirement in each NPDES permit. Violation of the limitation for chronic toxicity using the combined discharge would trigger accelerated monitoring of both the combined discharge and solely the Bacardi effluent (PRASA would be required to test their individual effluents for the Bayamon and Puerto Nuevo facilities in addition to the combined discharge as well) for twelve weeks. During the accelerated testing period an additional violation of the limitation on the combined discharge would require these three permittees to activate their TRE workplans, and implement their strategy to identify and abate the source of toxicity.

Calculation of Waste Load Allocation (WLA)

The WLA is used to determine the level of effluent concentration that will comply with water quality standards in receiving waters. Using the information available for dilution, WLAs were calculated for WET using the complete mix equation, which simplifies to

$$WLA = C_r \times \text{Dilution Ratio}$$

where C_r = the water quality criterion concentration. In Puerto Rico, a criterion continuous concentration of 1.0 TU_c, and a criterion maximum concentration (CMC) of 0.3 TU_a is used as the numeric interpretation of the water quality standard for toxicity.

Using a critical initial dilution (CID) ratio of 102:1, the chronic WLA would be

$$WLA_c = C_r \times 102 = 1.0 \times 102 = 102.0 \text{ TU}_c$$

$$WLA_a = 0.3 \times 102 = 30.6 \text{ TU}_a$$

$$WLA_{a,c} = WLA_a \times ACR = 30.6 \times 10 = 306 \text{ TU}_{a,c}$$

Calculate Long-term Averages (LTAs).

To calculate the long term average (LTA):

$$LTA = WLA \times e^{[0.05\sigma^2 - z\sigma]}$$

$$LTA_{a,c} = 306 \times 0.321 = 98.23 \text{ TU where:}$$

0.321 is the acute WLA multiplier for $C_v = 0.6$ at the 99th percentile (from Table 5-1, pg. 102 of the TSD)

$$LTA_c = WLA_c \times e^{[0.5\sigma^2 - z\sigma]}$$

$$LTA_c = 102 \times 0.527 = 53.75 \text{ where:}$$

0.527 is the chronic WLA multiplier at the 99th percentile (from Table 5-1, pg. 102 of the TSD)

Select the minimum LTA.

The LTA based on the chronic WLA is more limiting and will be used to develop permit limits.

Limit Calculation:

Using the 95th percentile and monthly sampling, the effluent limit is calculated as:

$$LTA \times e^{\frac{[z_{\sigma} - 0.5\sigma]^2}{n}} \text{ where } e^{\frac{[z_{\sigma} - 0.5\sigma]^2}{n}} = \text{AML LTA multiplier}$$

$z = 1.645$ for the 95th percentile occurrence probability for the AML is recommended

n = number of samples/month (the TSD recommends that a minimum n of 4 be used, even if monitoring is less frequent).

From Table 5-2, on pg. 102 of the TSD, for $C_v = 0.6$ and $n=4$,

$$AML = 53.75 \times 1.55 = \mathbf{83.32 \text{ TUc}}$$

NPDES PERMIT NO. PR0000591

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"),

Bacardi Corporation
PO Box 363549
San Juan, Puerto Rico 00936 - 3549

hereinafter referred to as "the permittee" is authorized to discharge from the following facility

Bacardi Corporation
State Road No. 165, Km 2.6
Industrial Area
Cataño, Puerto Rico 00632

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 shall become effective on EDP.

This permit and the authorization to discharge shall expire at midnight, EDP + 5 years.

Signed this day of

Kevin Bricke
Acting Director
Division of Environmental Planning
and Protection
U.S. Environmental Protection Agency
Region 2

A. EFFLUENT LIMITATIONS AND REQUIREMENTS

TABLE A-1 EFFLUENT LIMITATIONS AND REQUIREMENTS

During the period beginning on EDP and lasting through EDP + 5 years, the permittee is authorized to discharge from outfall serial number 001 (treated process, sanitary, utility, and miscellaneous wastewater). Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Gross Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (specified)		Measurement Frequency	Sample Type
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.		
Flow m ³ /day (MGD) ^{4,5}				7,570.80 (2.0)	Continuous Recording	
BOD ₅ (mg/l) ^{1,2,3,4} α				17,700	Monthly	Composite
Cadmium (Cd) (μg/l) ^{2,3,4}				30.9	Monthly	Grab
Color (Pt-Co units) ^{2,3,4}				84,000	Monthly	Grab
Copper (Cu) (μg/l) ^{2,3,4}				3,293	Monthly	Grab
Cyanide, Free (μg/l) ^{2,3,4} β γ				47	Monthly	Grab
Dissolved Oxygen (mg/l) ^{1,2,3,4}				-----	Daily	Grab
Enterococci (colonies/100 ml) ^{1,2,4,7}				30,667‡	Weekly	Grab
Fecal Coliforms (colonies/100 ml) ^{1,2,4,7}				244,420‡	Weekly	Grab
Lead (Pb) (μg/l) ^{2,3,4}				60.8	Monthly	Grab
Mercury (Hg) (μg/l) ^{2,3,4} γ				0.68	Monthly	Grab

TABLE A-1 EFFLUENT LIMITATIONS AND REQUIREMENTS

During the period beginning on EDP and lasting through EDP + 5 years, the permittee is authorized to discharge from outfall serial number 001 (treated process, sanitary, utility, and miscellaneous wastewater). Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristics</u>	<u>Gross Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	kg/day (lbs/day)		Other Units (specified)		Measurement Frequency	Sample Type
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.		
Nickel (Ni) ($\mu\text{g/l}$) ^{2,3,4}				412	Monthly	Grab
Nitrogen (NO_3 , NO_2 , NH_3) (mg/l) ^{2,3,4}				874.700	Monthly	Grab
Oil and Grease (mg/l) ^{2,3,4}	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) ^{2,3,4}	Shall always lie between 6.0 and 9.0.				Daily	Grab
Radioactive Materials (picocuries/l) ^{2,4}					ϕ	Grab
Silver (Ag) ($\mu\text{g/l}$) ^{2,3,4}				30.4	Monthly	Grab
Solids and Other Matter ^{2,4}	The waters of Puerto Rico shall not contain floating debris, scum and other floating material attributable to discharges in amounts sufficient to be unsightly or deleterious to the existing or designated uses of the waterbody.					
Sulfide (S) ($\mu\text{g/l}$) ^{2,3} δ @ (undissociated H_2S)				89,007	Monthly	Grab
Surfactants as MBAS ^{1,2,3,4} ($\mu\text{g/l}$)				1,494	Monthly	Grab

TABLE A-1 EFFLUENT LIMITATIONS AND REQUIREMENTS

During the period beginning on EDP and lasting through EDP + 5 years, the permittee is authorized to discharge from outfall serial number 001 (treated process, sanitary, utility, and miscellaneous wastewater). Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristics</u>	<u>Gross Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	kg/day (lbs/day)		Other Units (specified)		Measurement Frequency	Sample Type
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.		
Suspended, Colloidal or Settleable Solids (ml/l) ^{1,2,3} #	Solids from wastewater sources shall not cause deposition in or be deleterious to the existing or designated uses of the waters.				Daily	Grab
Taste and Odor Producing Substances ²	Shall contain none in amounts that will render any undesirable taste or odor to edible aquatic life.					
Temperature °F (°C) ^{2,3}				107.6 (42)	Daily	Grab
Thallium (TI) (µg/l) ^{2,3,4}				45.8	Monthly	Grab
Turbidity (NTU) ^{2,3,4}				9,244	Monthly	Grab
Zinc (Zn) (µg/l) ^{2,3,4}				3213.00	Monthly	Grab

TABLE A-1 Notes:

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%.

The wastewaters to be discharged from Bacardi Corporation, through the discharge point 001 are the following:

- | | | |
|--|--------------------------------------|--|
| a. boiler blowdown, wash and extraction | g. bottling plant wash | m. cooling tower # 3 blowdown and washes |
| b. mosto (distillation and fermentation) | h. process washes | n. pump seals (anaerobic filters) |
| c. clarification plant wash | i. molasses unloading and seal flush | o. CO ₂ plant condensate and washes |
| d. cooling towers blowdowns and other | j. fermentation floor drains | p. sanitary plant (discharge 003) |
| e. flavor steam traps | k. distillery floor drains | q. process water treatment steam traps |
| f. sulfur plant rinses and condensate | l. barrel wash | |

- 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 Section 6.2.3 of the PRWQSR as amended, for a one (1) year period, after which such monitoring shall be conducted annually. The monitoring program shall commence no later than thirty (30) days after the EQB's written approval of the Quality Assurance Project Plan (QAPP). The QAPP must be submitted for evaluation and approval of EQB no later than thirty (30) days after the EDP. The results of the monitoring program shall be submitted to EQB and EPA-Region II 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 these parameters. In such case the WQC will be reopened to include the applicable effluent limitation if considered necessary.

EPA Addendum: the one year monitoring program must be completed and submitted by EDP + 4.5 Years.

- α The effluent limitation for BOD₅ is based on the Mixing Zone Application for the Puerto Rico Aqueduct and Sewer Authority (PRASA) Puerto Nuevo and Bayamón facilities, and the Bacardi Corporation, after determining that there is a reasonable assurance that this limit will not cause violations to the water quality standard for Dissolved Oxygen for Class SC.
- γ See Special Condition 3.
- β The samples shall be analyzed using the method approved by EPA in letter of February 20, 2007.

- ‡ The geometric mean of a series of representative samples (at least five samples) of the water taken sequentially in a given instance. The permittee shall notify EPA fourteen (14) days in advance of resuming operations following shutdown. During the commencement of operations and for the period twenty-one (21) days following start-up, bacteria limitations shall be as follows:

	Daily Max.	Measurement Frequency	Sample Type
Enterococci (colonies/100 ml) ^{1,2,4,7}	803,378‡	Weekly	Grab
Fecal Coliforms (colonies/100 ml) ^{1,2,4,7}	382,602‡	Weekly	Grab

- δ See Special Condition 5.

- # The permittee shall perform the tests for Settleable Solids.

- @ The permittee shall use the approved EPA analytical method with the lowest possible detection limit, currently, EPA Method 376.2, Standard Methods 4500-S2- D (18th Edition), or HACH Company Method 8131 for the determination of the dissolved Sulfide (as S) concentration in the sample. Using the dissolved Sulfide concentration, the permittee shall calculate the Undissociated Hydrogen Sulfide concentration using Standard Methods Method 4500-S2- F (18th Edition). If the sample result for dissolved Sulfide is below the detection limit of EPA Method 376.2 or Standard Methods 4500-S2- D (18th Edition), i.e., < 100 µg/l, then the permittee has demonstrated that the sample result for Undissociated Hydrogen Sulfide is below that same detection limit, and that compliance with the permit limit of 2 µg/l for Undissociated Hydrogen Sulfide was achieved.

1, 2, 3, 4, 5, 6, and 7 See the endnotes to the Special Conditions

TABLE A-2 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on EDP and lasting through EDP + 5 years the permittee is authorized to discharge from internal monitoring point 002. Such discharge shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristics</u>	<u>Monitoring Requirements</u>				
	Quarterly Rolling Average (QRA)*	Monthly Avg. kg/day (lb/day)	Daily Maximum kg/day (lb/day)	Measurement Frequency	Sample Type
Flow m ³ /day (MGD)			----	Continuous Recording	
BOD ₅		30,000 (66,200)	42,400 (93,280)	Weekly	Composite
Total Suspended Solids (mg/l)		45,200 (99,440)	71,200 (156,640)	Weekly	Composite
Influent BOD ₅ Concentration (mg/l)	Monitor influent BOD5 concentration on a weekly basis			Weekly	Composite
Effluent BOD ₅ Concentration (mg/l)	Monitor influent BOD5 concentration on a weekly basis			Weekly	Composite
(A) Influent QRA BOD ₅ Concentration (mg/l) ¹	Calculate and report QRA Influent BOD ₅ concentration on a monthly basis.*				
(B) QRA Influent BOD ₅ Loading (lb/day) ²	Calculate and report QRA Influent BOD ₅ loading on a monthly basis.*				
(C) QRA Effluent BOD ₅ Loading (lb/day) ³	Calculate and report QRA Effluent BOD ₅ loading on a monthly basis.*				
Tiered QRA Percentage Removal Requirement					
When QRA Influent BOD ₅ Concentration (Row (A)) is ≥23,600 mg/l ⁴	Calculate and report QRA Percentage Removal monthly. QRA Percentage Removal shall be no less than 70%				
When QRA Influent BOD ₅ Concentration (Row (A)) is < 23,600 mg/l ⁴	Calculate and report QRA Percentage Removal monthly.				

Table A-2 Notes:

- * All Quarterly Rolling Averages (QRA) shall be calculated on a monthly basis, using the previous thirteen weekly results. Calculations shall be reported on a spreadsheet as a supplement to the DMR. This spreadsheet shall include all flow rates, concentrations, calculated loadings, and thirteen weeks of results used to calculate any QRA numbers.
- 1 The QRA Influent BOD₅ Concentration to the anaerobic digesters shall be calculated over the previous thirteen weeks and reported. The calculated result will determine whether the limitation of a minimum of 70% removal rate applies. This value must be reported in the DMR.
- 2 The QRA Influent BOD₅ Loading shall be calculated based on the influent concentration and the flow. This calculation must be included in the supplement to the DMR.
- 3 The QRA Effluent BOD₅ Loading shall be calculated based on the effluent concentration and flow. This calculation must be included in the supplement to the DMR.
- 4 The QRA Percentage Removal for BOD₅ shall be calculated as the percentage difference between the QRA Influent BOD₅ Loading (Row (B)) results, and the QRA Effluent BOD₅ Loading results (Row (C)). This calculation shall be included in the supplement to the DMR. The calculated value shall be reported in the DMR.

Internal monitoring point 002 is in the vicinity of a flow measuring device after anaerobic treatment, and is designed to monitor only effluent flows from the anaerobic digesters prior to mixing with any other waste streams.

Production data for the days of sampling for each month, in proof gallons per day, is required to be submitted with the DMR.

TABLE A-3 EFFLUENT LIMITATIONS AND REQUIREMENTS

During the period beginning on EDP and lasting through EDP + 5 years, the permittee is authorized to discharge from outfall serial number 003 (treated sanitary wastewater). Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	<u>Gross Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	Other Units (specified)		Measurement Frequency	Sample Type
	Monthly Avg.	7-day Average		
Flow m ³ /day (MGD)		----		Continuous Recording
BOD ₅ (mg/l) *	30	45	Monthly	Composite
Total Suspended Solids (mg/l) *	30	45	Monthly	Composite

* The arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic means of the values of influent samples collected at approximately the same time during the same period (85 percent removal).

To comply with the monitoring requirements specified above, samples shall be taken at sampling location 003 in the vicinity of the sanitary wastewater treatment plant. All flow measurements shall achieve accuracy within the range 10%.

B. SPECIAL CONDITIONS

The permittee shall comply with all Special Conditions specified below in accordance Section 301(b)(1)(C) of the Act, as amended (33 U.S.C. 466 *et seq.*). Pursuant to Section 401 of the Act, EPA has established limitations, standards, and other permit conditions based on EQB's Water Quality Certificate (WQC) as part of the Special Conditions.

1. The flow of discharge 001 shall not exceed the limitation of 7,570.80 m³/day (2.0 MGD) as daily maximum. No increase in flow shall be authorized without a recertification from the Puerto Rico Environmental Quality Board (EQB). ^{1,4,5}
2. 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. ^{1,2}
3. The samples taken for the analysis of 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 Section 6.2.3 of the Puerto Rico Water Quality Standards Regulation (PRWQSR), as amended. ⁴
4. All sample collection, preservation, and analysis shall be carried out in accordance with the Code of Federal Regulation (CFR) Number 40, 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 licensed microbiologist or a medical technician authorized to practice the profession in Puerto Rico. ^{1,3}
5. The permittee shall use the approved EPA analytical method, with the lowest possible detection limit, in accordance with 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 approved EPA method established in the 40 CFR Part 136, then, the concentration of undissociated H₂S should be reported as "below detection limit". ^{2,3}
6. The solid wastes (sludge, screenings and grit) generated due to the treatment system operation 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 body of water or soil. In the event of a spill of solid waste on land or into a body of water, 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.

These notifications shall include the following information:

- a) Spill material
- b) Spill volume
- c) Measures taken to prevent the spill material to gain access to any body of water

This special condition does not relieve the permittee from its responsibility to obtain the corresponding permits from the EQB's Solids Wastes Program and other state and federal agencies, if any. ^{4,6}

7. A log book should 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 offers the service.

A copy of the Non-Hazardous Solid Waste Collection and Transportation Service Permit issued by the authorized official from the EQB should be attached to the log book. ³

8. The sludge produced within the facility due to the operation of the treatment system shall be analyzed and all constituents shall be identified as required by "Standards for the Use or Disposal of Sewage Sludge" (CFR Number 40, Part 503). The sludge shall be disposed properly in such manner that water pollution or other adverse effects to surface waters or to ground water do not occur. ^{4,6}
9. If any standard or prohibition to the sanitary sludge disposal is promulgated and said prohibition or standard is more stringent than any condition, restriction, prohibition or standard contained in the NPDES permit, such permit shall be modified accordingly or revoked and reissued to be adjusted with regard to such prohibition or standard. ⁶
10. No changes in the design or capacity of the treatment system will be permitted without the previous authorization of EQB. ⁵
11. Prior to the construction of any additional treatment systems or prior to the modification of the existing one, the permittee shall obtain the approval of the engineering report, plans and specifications from EQB. ⁵
12. 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. ^{1,4}
13. The flow measurement 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. ^{4,5}
14. The sampling point for discharge 001 shall be located immediately after the primary flow measuring device of the effluent of facility.
15. The sampling point for discharge 001 shall be labeled with a 18 inches x 12 inches (minimum dimensions) sign that reads as follows:

"PUNTO DE MUESTREO PARA LA DESCARGA 001"

16. All water or wastewater treatment facilities, whether publicly or privately owned, must be operated by a person licensed by the Potable Water and Wastewater Treatment Plants Operators Examining Board of the Commonwealth of Puerto Rico. ⁴
17. The EQB has defined and authorized a Mixing Zone (MZ) pursuant to Article 5 of the PRWQSR. ³

- a. The MZ is delineated by the following points (See Diagram-I):

Geographic Coordinates *

Point 1	Lat. 18° 29.181' Long. 66° 08.518'
Point 2	Lat. 18° 29.202' Long. 66° 08.503'
Point 3	Lat. 18° 29.100 Long. 66° 08.340'
Point 4	Lat. 18° 29.097' Long. 66° 08.150'
Point 5	Lat. 18° 29.072' Long. 66° 08.150'
Point 6	Lat. 18° 29.075' Long. 66° 08.348'

*** NAD 83 State Plane Coordinates**

The diffuser configuration is a one hundred twenty (120) degree "Y" type consisting of two (2) legs of one thousand ten (1,010) feet long and a constant diameter of eighty four (84) inches. A total of one hundred two (102) ports along each diffuser's leg shall be opened. There are twenty (20) ports of seven (7) inches at the end of each diffuser's leg and eighty two (82) ports of six (6) inches between the "Y" split and the larger ports at the end of each diffuser's leg. The ports discharge in alternate directions at a constant spacing of ten (10) feet.

- b. The MZ is defined for the following parameters:

<u>Parameter</u>	<u>Daily Maximum Discharge Limitation at Outfall Serial Number 001</u>	<u>Daily Maximum Limitation at the Borders of the MZ</u>
Cadmium (Cd) (µg/l)	30.90	8.85
Color (Pt-Co)	84,000	Ω
Copper (Cu) (µg/l)	3,293	3.73
Cyanide, Free (CN) (µg/l)	47	1.0
Dissolved Oxygen (mg/l)	Monitoring Only	≥4.0
Enterococci (col/100 ml)	30,667 †	*
Fecal Coliforms (col/100 ml)	244,420 †	**
Lead (Pb) (µg/l)	60.8	8.52
Mercury (Hg) (µg/l)	0.68	0.051
Nickel (Ni) (µg/l)	412	8.28
Nitrogen (NO ₂ , NO ₃ , NH ₃) (mg/l)	847.700	5.000
pH (SU)	6.0 - 9.0	7.3 - 8.5
Silver (Ag) (µg/l)	30.4	2.24
Sulfide (µg/l) (undissociated H ₂ S)	89,007	2
Surfactants (MBAS) (µg/l)	1,494	500
Temperature °F (°C)	107.6 (42)	δ
Thallium (TI) (µg/l)	45.8	0.47
Turbidity (NTU)	9,244	10
Zinc (Zn) (µg/l)	3,213.00	85.62

† The geometric mean of a series of representative samples (at least five samples) of the water taken sequentially in a given instance.

EPA Addendum:

EPA had revised the limitations for fecal coliform and bacteria for Outfall 001 to be consistent with current existing effluent quality during normal operations. During the period for three weeks (21 days) following resuming operations after a shutdown, the limitations for bacteria shall be:

Ω The color at the edge of the mixing zone shall not exceed the color of the receiving water body.

δ 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).

<u>Parameter</u>	<u>Daily Maximum Discharge Limitation at Outfall Serial Number 001</u>	<u>Daily Maximum Limitation at the Borders of the MZ</u>
Enterococci (col/100 ml)	382,602 ‡	*
Fecal Coliforms (col/100 ml)	803,378 ‡	**

* The enterococci density in terms of geometric mean of at least 5 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 site data exist to establish a site-specific log standard deviation.

** The Fecal Coliforms geometric mean of a series of representative samples (at least five samples) of the water taken sequentially in a given instance shall not exceed 200 colonies/100 ml. Not more than 20 percent of the samples shall exceed 400 colonies/100 ml.

- c. The permittee shall conduct annually definitive acute and chronic toxicity tests using the organisms *Mysidopsis bahia*, *Cyprinodon variegatus* and *Arbacia punctulata* for the wastewater discharge identified as 001.
- d. The toxicity test shall be conducted according to the most recent editions of the following publications of EPA:
 - 1) Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, (EPA-821-R-02-012) Fifth Edition, October 2002.
 - 2) Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, (EPA-821-R-02-013) Fourth Edition, October 2002.
- e. The procedures, methods, techniques, conditions, etc., included in the above mentioned publications shall be followed at all times. If the permittee wants to use other procedures, methods, etc., because he understands that:
 - 1) by the nature or conditions of this case is impossible to follow such publications;

2) other procedures, methods, etc., are adequate;

then the permittee shall, prior to the utilization of other procedures, methods, etc., obtain the EPA and EQB written approval for their usage.

- f. The effluent samples for the toxicity tests shall be used in or before 36 hours after being collected.
- g. A report on the toxicity tests conducted shall be submitted to the EQB, during the sixty (60) days period after the tests were conducted. This report shall be prepared according to the aforementioned publications of EPA.
- h. Based on the review of the test results, the EQB can require additional toxicity tests, including toxicity/treatability studies and can revoke the final mixing zone authorization according with Section 5.14 of the PRWQSR.
- i. Solids from wastewater sources shall not cause deposition in, or be deleterious to, the designated uses of the waters.
- j. The discharge shall not cause the growth or propagation of organisms that negatively disturb the ecological equilibrium in the areas adjacent to the mixing zone.
- k. The mixing zone shall be free of debris, scum, floating oil and any other substances that produce objectionable odors.
- l. The permittee shall maintain in good operating conditions the discharge system [discharge outfall (land and submarine), diffuser, ports, etc.]. At least once a year, the discharge system shall be inspected to determine if some repairs, replacing, etc., on the discharge system is required. A report of such inspections shall be submitted to EPA and EQB not later than sixty (60) days after the performance of the inspection.
- m. The EQB, can require that the permittee conduct bioaccumulation studies, dye studies, water quality studies or any other pertinent studies. If the EQB require one or more of the aforementioned studies, the permittee will be notified to conduct such study(ies). One hundred and 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).

- 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 it authorizes any injury to persons or property or invasion of other private rights, of any infringement of Federal or State Law or Regulations.
20. The permittee shall conduct annually definitive acute and chronic toxicity tests using the organisms Mysidopsis bahia, Cyprinodon variegatus and Arbacia punctulata for the wastewater discharge identified as 001. See Special Condition No. 20 for further toxicity testing requirements.
- a. The toxicity tests shall be conducted according to the most recent editions of the following publications of the EPA:
 - 1) Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (EPA-821-R-02-012), Fifth Edition, October 2002.
 - 2) Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms (EPA-821-R-02-013), Fourth Edition, October 2002.
 - b. The procedures, methods, techniques, conditions, etc., included in the above mentioned publications shall be followed at all times. If the permittee determines to use other procedures, methods, etc., because the permittee understands that:
 - i. by the nature or conditions of this case is impossible to follow such publications;
 - ii. other procedures, methods, etc., are adequate,then the permittee shall, prior to the utilization of other procedures, methods, etc., obtain the written approval from the EPA and EQB.
 - c. The effluent samples for the toxicity tests shall be used in or before 36 hours after being collected.

- d. A report on the toxicity tests conducted shall be submitted to the EQB and EPA, during the sixty (60) days period after the tests were conducted. This report shall be prepared according to the aforementioned publications of EPA.
- e. Based on the review of the test results, the EQB can require additional toxicity tests, including toxicity/treatability studies and can revoke the final mixing zone authorization according with Section 5.14 of the PRWQSR.
- f. Solids from wastewater sources shall not cause deposition in, or be deleterious to, the existing or designated uses of the waters.
- g. The discharge shall not cause the growth or propagation of organisms that negatively disturb the ecological equilibrium in the areas adjacent to the mixing zone.
- h. The mixing zone shall be free of debris, scum, floating oil and any other substances that produce objectionable odors.
- i. The permittee shall maintain in good operating conditions the discharge system (discharge outfall [land and submarine], diffuser, ports, etc.). At least once a year, the discharge system shall be inspected to determine if some repairs, replacing, etc., on the discharge system is required. A report of such inspections shall be submitted to EPA and EQB not later than sixty (60) days after the performance of the inspection.
- j. 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.
- k. 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.
- l. 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.

21. 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 20.

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*. During years 1, 3, and 5 of the permit, a split of each quarterly composite sample shall be also analyzed for all other monitored parameters for Bacardi effluent from Bacardi Discharge Point 001.

- b. Effluent Limitation:

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

This permit requires additional toxicity testing if a chronic toxicity effluent limit is violated. The permittee shall notify EPA in writing within fourteen days of the permittee's receipt of results violating this effluent limitation.

- c. TRE Workplan

No later than EDP + 90 Days, the permittee shall prepare and submit a Toxicity Reduction Evaluation (TRE) Workplan to EPA Region 2. This plan shall include steps the permittee intends to follow if toxicity is measured below the chronic toxicity effluent limitation is violated and 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.

- 3) Identification of responsible persons/parties for conducting the TRE.
- 4) Potential source reduction measures and pollution prevention opportunities to reduce toxicity.

d. Accelerated Toxicity Testing and Commencement of TRE

- 1) If the combined discharge displays a chronic toxicity result violating the effluent limitation, then the permittee shall conduct six additional toxicity tests of the combined discharge for all three plants using the same species and test method, every two weeks, over a 12 week period. The permittee shall also split the sample and perform testing for the species in question on solely the Bacardi effluent taken from Outfall 001, for each of these six test results.
- 2) Accelerated testing shall begin within 14 days of the permittee's receipt of test results violating the effluent limit. If none of the additional toxicity tests exceeds a chronic toxicity effluent limit, then the permittee may return to its regular testing frequency for both the combined discharge and solely Bacardi effluent. All laboratory test results shall be submitted to EPA and EQB within 30 days of receipt by the permittee, as required in item f.3 of this Special Condition.
- 3) If one of the additional toxicity tests for the combined discharge (in paragraph d.1 of this condition) exceeds a toxicity effluent limit, then, within 14 days of receipt of this test result, the permittee shall initiate the TRE workplan prepared in compliance with 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:
 - A) Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants (EPA 833-B-99-002, 1999)
 - B) Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (EPA/600/2-88/070, 1989).
- 4) The permittee may also use the following manuals for Toxicity Identification Evaluation to identify the causes of toxicity:
 - A) Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I (EPA/600/6-91/005F, 1992);
 - B) Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity (EPA/600/R-92/080, 1993);

- C) 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
 - D) Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document (EPA/600/R-96-054, 1996).
- 5) The trigger or performance of a TRE shall not relieve the permittee of its responsibilities to conduct WET monitoring in compliance with Section a. of this Special Condition. The permittee must also continue to comply with the reporting requirements of item f.3 of this Special Condition for all test results in compliance with this permit and progress reports on the TRE process.
- 6) The trigger or performance of accelerated monitoring shall not relieve the permittee of its responsibilities to conduct WET monitoring in compliance with Section a. of this Special Condition. The permittee must also submit test results within 30 days after the permittee's receipt of the laboratory reports for accelerated monitoring in order to comply with the reporting requirements of item g.3 of this Special Condition. Test results that were received by the permittee due to accelerated monitoring may be used to satisfy the requirements of Section a. of this Special Condition, provided that all requirements of Section a. (including species, test type, frequency, timing, and sample requirements) are met.
- e. 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 survival, growth, and fecundity the *Mysidopsis Bahia* (mysid shrimp), survival and growth for the *Cyprinodon Variegatus* (sheepshead minnow), and 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.

f. Reporting of Chronic Toxicity Monitoring Results

- 1) A procedure report shall be to EPA and EQB by October 1, 2008. 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.

g. Reopener Clause for Toxicity Requirements

In accordance with 40 CFR 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.

22. Reopener Clause for Endangered Species Protection

This permit may be modified or revoked and reissued based on the results of ESA section 7 consultation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service.

1. According to Article 1, Puerto Rico Water Quality Standards Regulation as Amended.
2. According to Article 3, Puerto Rico Water Quality Standards Regulation as Amended.
3. According to Article 5, Puerto Rico Water Quality Standards Regulation as Amended.
4. According to Article 6, Puerto Rico Water Quality Standards Regulation as Amended.
5. According to the Environmental Public Policy Act of September 22, 2004, Act No. 416, effective since March 22, 2005.
6. According to the Section 405(d)(4) of Federal Clean Water Act, as amended (33 U.S.C. 466 et. seq.).
7. According to the Code of Federal Regulation Number 40 (40 CFR), Part 131.40, as amended (Federal Register/Volume 69, No. 16/Monday, January 26, 2004).

C. MONITORING AND REPORTING

1. Monitoring and records. See Part II.B.10.
2. Discharge monitoring reports.
 - a. See Part II.B.12.d.
 - b. Monitoring results obtained during the previous month shall be summarized and reported on a Discharge Monitoring Report Form (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting period. The first report is due on EDP + 1 Month + 28 days. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator and State Director at the following addresses:

COMPLIANCE ASSISTANCE
PROGRAM SUPPORT BRANCH
U.S. ENVIRONMENTAL PROTECTION
AGENCY, REGION 2
290 BROADWAY - 21ST FLOOR
NEW YORK, NEW YORK 10007-1866

DIRECTOR
CARIBBEAN ENVIRONMENTAL
PROTECTION DIVISION
U.S. ENVIRONMENTAL PROTECTION
AGENCY, REGION 2
EDIF CENTRO EUROPA APT 417
1492 AVENIDA PONCE DE LEON
SAN JUAN, PUERTO RICO 00907-4127

ENVIRONMENTAL QUALITY BOARD
OF PUERTO RICO
P.O. BOX 11488
SANTURCE, PUERTO RICO 00910

3. Twenty-four hour reporting.

Pollutants for which the permittee must report violations of maximum daily discharge limitations under paragraph 12.f of Part II.B (40 CFR §122.41(1)(6)(ii)(C)) (24 hour reporting) shall be listed in the permit as included in Table A-1.

4. Additional reporting requirements.

Existing manufacturing, commercial, mining, and silvicultural dischargers. In addition to the reporting requirements under 40 C.F.R. §122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
- (1) One hundred micrograms per liter (100 ug/l);
 - (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2, 4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7); or
 - (4) The level established as follows by the Director in accordance with 40 C.F.R. §122.44(f): Not Applicable
- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
- (1) Five hundred micrograms per liter (500 ug/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(g)(7); or
 - (4) The level established as follows by the Director in accordance with 40 C.F.R. §122.44(f): Not Applicable

A. DEFINITIONS

1. "Average monthly discharge limitation" means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
2. "Average weekly discharge limitation" means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.
3. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
4. "Composite" means a combination of individual (or continuously taken) samples obtained at regular intervals over the entire discharge day. The volume of each sample shall be proportional to the discharge flow rate. For a continuous discharge, a minimum of 24 individual grab samples (at hourly intervals) shall be collected and combined to constitute a 24-hour composite sample. For intermittent discharges of more than four (4) hours duration, grab samples shall be taken at a minimum of 30 minute intervals.
5. "Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharge over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of pollutant over the day. For purposes of sampling, "daily" means an operating day or 24-hour period.
6. "Director" means the "Regional Administrator" or the "State Director", as the context requires, or an authorized representative. Until the State has an approved State program authorized by EPA under 40 C.F.R. Part 123, "Director" means the Regional Administrator. When there is an approved State program, "Director" normally means the State Director. Even in such circumstances, EPA may retain authority to take certain action (see, for example, 40 C.F.R. 123.1(d), 45 Federal Register 14178, April 1, 1983, on the retention of jurisdiction over permits EPA issued before program approval). If any condition of this permit requires the reporting of information or other actions to both the Regional Administrator and the State Director, regardless of who has permit-issuing authority, the terms "Regional Administrator" and "State Director" will be used in place of "Director".

7. "Discharge Monitoring Report" or "DMR" means the EPA uniform national form, including any subsequent additions, revisions, or modifications, for the reporting of self-monitoring results by permittees.
8. "Grab" means an individual sample collected in less than 15 minutes.
9. "Gross" means the weight or the concentration contained in the discharge. (Unless a limitation is specified as a net limitation, the limitation contained in this permit is a gross limitation).
10. "Maximum daily discharge limitation" means the highest allowable "daily discharge".
11. "Monthly" means one day each month (the same day each month) and a normal operating day (e.g., the 2nd Tuesday of each month).
12. "Net" means the amount of a pollutant contained in the discharge measured in appropriate units as specified herein, less the amount of a pollutant contained in the surface water body intake source, measured in the same units, over the same period of time, provided:
 - a. The intake water source must be drawn for the same body of water into which the discharge is made; and
 - b. In cases where the surface water body intake source is pretreated for the removal of pollutants, the intake level of a pollutant to be used in calculating the net is that level contained after the pretreatment steps.
13. "Regional Administrator" means the Regional Administrator of Region II of EPA or the authorized representative of the Regional Administrator.
14. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
15. "State Director" means the chief administrative officer of the State water pollution control agency, or the authorized representative of the State Director.
16. "Toxic pollutant" means any of the pollutants listed in 40 C.F.R. §401.15 (45 F.R. 44503, July 30, 1979) and any modification to that list in accordance with Section 307 (a)(1) of the Clean Water Act.

17. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
18. "Weekly" means every seventh day (the same day of each week) and a normal operating day.

B. GENERAL CONDITIONS

TABLE OF REGULATORY REFERENCES FOR GENERAL CONDITIONS

Note: General Condition language in Part II, Sections B.1 through B.14, and B.17 is based on the July 1, 2010 Code of Federal Regulations (C.F.R.). Reference to language in the U.S.C. (United States Code) is based on the date of permit issuance.

<u>Section</u>	<u>Section Title</u>	<u>Reference</u>
B.1.	Duty to Comply	40 C.F.R. §122.41(a)
B.2.	Duty to Reapply	40 C.F.R. §122.41(b)
B.3.	Need to Halt or Reduce not a Defense	40 C.F.R. §122.41(c)
B.4.	Duty to Mitigate	40 C.F.R. §122.41(d)
B.5.	Proper operation and maintenance	40 C.F.R. §122.41(e)
B.6.	Permit actions	40 C.F.R. §122.41(f)
B.7.	Property rights	40 C.F.R. §122.41(g)
B.8.	Duty to provide information	40 C.F.R. §122.41(h)
B.9.	Inspection and Entry	40 C.F.R. §122.41(i)
B.10.	Monitoring and records	40 C.F.R. §122.41(j)
B.11.	Signatory requirements	40 C.F.R. §122.41(k)
B.12.	Reporting Requirements	40 C.F.R. §122.41(l)
B.13.	Bypass	40 C.F.R. §122.41(m)
B.14.	Upset	40 C.F.R. §122.41(n)
B.15.	Removed substances	33 U.S.C. §1311
B.16.	Oil and hazardous substance liability	33 U.S.C. §1321
B.17.	Reopener clause for toxic effluent limitations	40 C.F.R. §122.44(b)(1)
B.18.	State laws	33 U.S.C. §1370
B.19.	Availability of information	33 U.S.C. §1318
B.20.	Severability	-

1. Duty to Comply.

- a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
- b. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
- c. The Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Clean Water Act, is subject to a civil penalty not to exceed \$37,500 per day for each violation (as adjusted by 40 C.F.R. Part 19).
- d. The Clean Water Act provides that any person who negligently violates Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402 of the Clean Water Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Clean Water Act, is subject to criminal penalties of not less than \$2,500 nor more than \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation of the Clean Water Act, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both.
- e. The Clean Water Act provides that any person who knowingly violates Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Clean Water Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Clean Water Act, is subject to criminal penalties of not less than \$5,000 nor more than \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation of the Clean Water Act, a person shall be subject to criminal penalties

of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both.

- f. Any person who knowingly violates Sections 301, 302, 303, 306, 307, 308, 318 or 405 of the Clean Water Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Clean Water Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. A person which is an organization, as defined at 33 U.S.C. 309(c)(3)(B)(iii), shall, upon conviction be subject to a fine of not more than \$1,000,000. In the case of a second or subsequent conviction for a knowing endangerment violation of the Clean Water Act, the maximum punishment shall be doubled with respect to both fine and imprisonment.
- g. Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Clean Water Act or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this chapter, shall upon conviction, be punished by a fine of not more than \$10,000, or imprisonment for not more than 2 years, or both. In the case of a second or subsequent conviction, under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.
- h. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$16,000 per violation (as adjusted by 40 C.F.R. Part 19), with the maximum amount of any Class I penalty assessed not to exceed \$37,500 (as adjusted by 40 C.F.R. Part 19). Penalties for Class II violations are not to exceed \$16,000 per day for each day during which the violation continues (as adjusted by 40 C.F.R. Part 19), with the maximum amount of any Class II penalty not to exceed \$177,500 (as adjusted by 40 C.F.R. Part 19).

2. Duty to Reapply.

This permit and the authorization to discharge shall terminate on the expiration date indicated on the first page. In order to receive authorization to discharge after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permit issuing authority remains EPA, the permittee shall complete, sign, and submit an application to the Regional Administrator no later than 180 days before the expiration date.

3. Need to Halt or Reduce not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to Mitigate.

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

6. Permit Actions

This permit may be modified, revoked and reissued, or terminated during its term pursuant to 40 C.F.R. Part 122, Subpart D. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privileges.

8. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit; or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

9. Inspection and Entry

The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

10. Monitoring and records.

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 C.F.R. part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement report or application. This period may be extended by request of the Director at any time.
- c. Records of monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) analyses were performed;

- (4) The individual(s) who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.
- d. Monitoring must be conducted according to test procedures approved under 40 C.F.R. Part 136 and any subsequent changes to the methods contained therein unless another method is required under 40 C.F.R. subchapters N or O.
- e. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both. (See U.S.C. §1319(c)(4)).
11. Signatory requirements. All applications, reports, or information submitted to the Director shall be signed and certified. (See 40 C.F.R. §122.22)
- a. Applications. All permit applications shall be signed as follows:
- (1) For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

Note: EPA does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 C.F.R. §122.22(a)(1)(i). The Agency will presume that these responsible corporate officers have the

requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under 40 C.F.R. §122.22(a)(1)(ii) rather than to specific individuals.

- (2) For a partnership or sole proprietorship. By a general partner or the proprietor, respectively; or
 - (3) For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
- b. All reports required by permits, and other information requested by the Director shall be signed by a person described in paragraph 11.a of Part II.B, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- (1) The authorization is made in writing by a person described in paragraph 11.a of Part II.B;
 - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and,
 - (3) The written authorization is submitted to the Regional Administrator, U.S. Environmental Protection Agency, Region II, 290 Broadway, New York, New York, 10007-1866, Attention: Compliance Assistance Program Support Branch, and to the State Director.
- c. Changes to authorization. If an authorization under paragraph 11.b of Part II.B is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph 11.b of Part II.B must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

- d. Certification. Any person signing a document under paragraph 11.a or 11.b of Part II.B shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

- e. The Clean Water Act provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by imprisonment for not more than 6 months per violation, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both. (See section 309.c.4 of the Clean Water Act).

12. Reporting Requirements.

- a. Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
- (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 C.F.R. §122.29(b);
 - (2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under paragraph 4.a of Part I.B (40 C.F.R. §122.42(a)(1)); or

- (3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- c. Transfers. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act. (See 40 C.F.R. §122.61; in some cases, modification or revocation and reissuance is mandatory.)
- d. Monitoring reports. Monitoring results shall be reported at the intervals specified in Part I of this permit.
 - (1) Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.
 - (2) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 C.F.R. 136, or another method required for an industry-specific waste stream under 40 C.F.R. subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.
 - (3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
- e. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
- f. Twenty-four hour reporting.

(1) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances to the Regional Administrator at (732) 548-8730 and State Director. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(2) The following shall be included as information which must be reported within 24 hours under this paragraph.

- (a) Any unanticipated bypass (see 13 below) which exceeds any effluent limitation in the permit. (See 40 C.F.R. §122.41(g)).
- (b) Any upset (see 14 below) which exceeds any effluent limitation in the permit.
- (c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. (See 40 C.F.R. §122.44(g)).

(3) The Director may waive the written report on a case-by-case basis for reports under paragraph 12.f.(2) of Part II.B if the oral report has been received within 24 hours.

g. Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs 12.d, e, and f of Part II.B, at the time the monitoring reports are submitted. The reports shall contain the information listed in paragraph 12.f of Part II.B.

h. Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

13. Bypass

a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 13.b. and 13.c of Part II.B.

b. Notice.

- (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
- (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph 12.f of Part II.B (24-hour notice).

c. Prohibition of bypass.

- (1) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:
 - (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (c) The permittee submitted notices as required under paragraph 13.b of Part II.B.
- (2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 13.b.(1) of Part II.B.

14. Upset.

a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph 14.(b) of Part II.B are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittee submitted notice of the upset as required in paragraph 12.f.(2)(b) of Part II.B (24 hour notice); and
 - (4) The permittee complied with any remedial measures required under paragraph 4 of Part II.B (duty to mitigate).
- c. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

15. Removed substances.

Pursuant to section 301 of the Clean Water Act, solids, sludges, filter backwash or other pollutants removed in the course of treatment or control of wastewaters and/or the treatment of intake waters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters. The following data shall be reported together with the monitoring data required in paragraph 2 of Part I.B:

- a. The sources of the materials to be disposed of;
- b. The approximate volumes and weights;
- c. The method by which they were removed and transported; and
- d. Their final disposal locations.

16. Oil and hazardous substance liability.

The imposition of responsibilities upon, or the institution of any legal action against the permittee under Section 311 of the Clean Water Act shall be in conformance with regulations promulgated pursuant to Section 311 to discharges from facilities with NPDES permits.

17. Reopener clause for toxic effluent limitations.

Other effluent limitations and standards under sections 301, 302, 303, 307, 318 and 405 of the Clean Water Act. If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Clean Water Act for a toxic pollutant and that standard or prohibition is

more stringent than any limitation on the pollutant in the permit, the Director shall institute proceedings under these regulations to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition. See also 40 C.F.R. §122.41(a).

18. State laws.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act. The issuance of this permit does not preempt any duty to obtain State or local assent required by law for the discharge.

19. Availability of information. (Section 308 of the Clean Water Act)

- a. NPDES permits, effluent data, and information required by NPDES application forms provided by the Director under 40 C.F.R. §122.21 (including information submitted on the forms themselves and any attachments used to supply information required by the forms) shall be available for public inspection at the offices of the Regional Administrator and State Director.
- b. In addition to the information set forth in subsection a., any other information submitted to EPA in accordance with the conditions of this permit shall be made available to the public without further notice unless a claim of business confidentiality is asserted at the time of submission in accordance with the procedures in 40 C.F.R. Part 2 (Public Information).
- c. If a claim of confidentiality is made for information other than that enumerated in subsection a., that information shall be treated in accordance with the procedures in 40 C.F.R. Part 2. Only information determined to be confidential under those procedures shall not be made available by EPA for public inspection.

20. Severability.

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

C. EFFECTIVENESS OF PERMIT

1. This permit shall become effective in its entirety on the date indicated on the first page of this permit unless a petition has been filed with the Environmental Appeals Board to review any condition of the permit decision pursuant to the provisions of 40 C.F.R. Part 124.19. All contested conditions and any uncontested condition(s) that are inseverable from the contested conditions shall be stayed. All other conditions shall become effective thirty (30) days after the date of the notification specified in 40 C.F.R. §124.16(a)(2)(ii).
2. For purposes of judicial review under Section 509(b) of the Clean Water Act, final agency action on a permit does not occur unless and until a party has exhausted its administrative remedies under 40 C.F.R. 124. Any party which neglects or fails to seek review under 40 C.F.R. §124.19, thereby waives its opportunity to exhaust available agency administrative remedies.