

COMMONWEALTH OF PUERTO RICO / OFFICE OF THE GOVERNOR

**TITLE V FINAL OPERATING PERMIT
AIR QUALITY AREA
ENVIRONMENTAL QUALITY BOARD**



Permit Number:	PFE-TV-4911-19-0306-0447
Permit Application Received:	March 21, 2006
Issue and/or Effectiveness Date:	May 14, 2010
Expiration Date:	May 14, 2015

In accordance with the provisions of Part VI of the Regulation for the Control of Atmospheric Pollution (RCAP) and the Code of Federal Regulations, Title 40, Part 70

**PUERTO RICO ELECTRIC POWER AUTHORITY
PREPA DAGUAO TURBINE POWER BLOCK
CEIBA, PUERTO RICO**

hereinafter referred to as **PREPA Daguao** or **the permittee**, is authorized to operate a stationary source of air pollutants limited to the emission units and conditions described in this permit. Until such time as this permit expires, is modified or revoked, PREPA Daguao is allowed to discharge air pollutants from those processes and activities directly related to or associated with air pollutant sources in accordance with the requirements, limitations and conditions of this permit.

The conditions in this permit are federally and state enforceable. Requirements, which are only state enforceable are identified as such in the permit. A copy of this permit shall be kept on-site at the above-mentioned facility at all times.

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Section I- General Information

A. Facility Information:

Name of the Company:	Puerto Rico Electric Power Authority
Mailing Address:	P.O. Box 364267
City:	San Juan
State:	Puerto Rico
Zip Code:	00936-4267
Plant Name:	PREPA Daguao Turbine Power Block
Physical Address:	PR-3 Km. 58.3 Ceiba, Puerto Rico
Responsible Officer:	Josué A. Colón Ortíz Director Generation, Transmission and Distribution
Facility Contact Person:	Carlos Ortíz Dones Gas Turbine Units Supervisor
Phone Number:	787-521-5037/ 787-521-5038
Fax:	787-521-5436
Primary SIC Code:	4911

B. Description of Process:

PREPA Daguao Gas Turbine Power Block (PREPA Daguao) is located in the eastern part of Puerto Rico adjacent to the town of Ceiba (PR-3, Km. 58.3) and it is used to produce electric energy. The Power Block consists of two combustion turbines or gas turbines which combust No. 2 fuel oil to generate electricity. The No. 2 fuel oil is received by truck and pumped into a fuel storage tank. The fuel is pumped from the tank to the gas turbines.

PREPA Daguao has the potential to emit SO₂ and NO_x in excess of 100 tons per year.

Section II- Description of Emission Units

The emission units regulated by this permit are the following:

Emission Unit	Description	Control Device
DAGT-1	Each emission unit is a combustion turbine of simple cycle. The capacity of each turbine is 301.5 MMBtu/hr.	None
DAGT-2		

Section III- General Permit Conditions

- 1- **Sanctions and Penalties:** The permittee is obligated to comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Any violation of the terms of this permit will be subject to administrative, civil or criminal penalties as established in the Puerto Rico Environmental Public Policy Act, Article 16 (Act Number 416, September 22, 2004, as amended).
- 2- **Right of Entry:** As specified under Rules 103 and 603(c)(2) of the RCAP, the permittee shall allow the EQB or an authorized representative, upon presentation of credentials and other documents as may be required by law, to perform the following activities:
 - (a) Enter upon the permittee's premises where an emission source is located or where emission related activities are conducted, or where records must be kept under the conditions of this permit, under the RCAP, or under the Clean Air Act;
 - (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit, under the RCAP, or under the Clean Air Act;
 - (c) Inspect and examine any facility, equipment (including monitoring and air pollution control equipment), practices or operations (including QA/QC methods) regulated or required under this permit; as well as sampling emissions of air quality and fuels; and
 - (d) As authorized by the Clean Air Act and the RCAP, to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements.
- 3- **Sworn Statement:** All reports required pursuant Rule 103(D) of the RCAP (i.e., semiannual monitoring reports and annual compliance certification) shall be submitted together with a sworn statement or affidavit by the Responsible Official or a duly

authorized representative. Such sworn statement shall attest to the truth, correctness and completeness of such records and reports.

- 4- **Data Availability:** As specified under Rule 104 of the RCAP, all emission data obtained by or submitted to the Board, including data reported pursuant to Rule 103 of the RCAP, as well as that obtained in any other way, shall be available for public inspection and may also be made available to the public in any additional manner that the Board may deem appropriate.
- 5- **Emergency Plan:** As specified under Rule 107 of the RCAP, the permittee shall have available an Emergency Plan which must be consistent with adequate safety practices, and provides for the reduction or retention of the emissions from the plant during periods classified by the Board as air pollution alerts, warnings or emergencies. These plans shall identify the emission sources, include the reduction to be accomplished for each source and the means by which such reduction will be accomplished. These plans shall be available for inspection, as required by representatives of the Board at any times.
- 6- **Compliance Certification:** As specified under Rule 602(c)(2)(ix)(C) of the RCAP, **PREPA Daguao** shall submit each year a compliance certification. This certification must be submitted to both the Board and the EPA¹ no later than April 1 of each year covering the previous calendar year. The compliance certification shall include, but is not limited to, the information required under Rule 603(c) of the RCAP as follows:
 - a. The identification of each term or condition of the permit that is the basis of the certification; and
 - b. The compliance status. Each deviation shall be identified and taken into account in the compliance certification; and
 - c. A statement indicating whether the compliance was continuous or intermittent; and
 - d. The methods or other means used for determining the compliance status with each term and condition, currently and over the reporting period consistent with sections (a)(3)-(5) of Rule 603 of the RCAP; and

¹ The certification to the EQB shall be mailed to: Manager, Air Quality Area, P.O. Box 11488, San Juan, PR 00910. The certification to the EPA shall be mailed to: Chief, Enforcement and Superfund Branch CEPD, US EPA – Region II, Centro Europa Building, 1492 Ponce de Leon Ave. Stop 22, Santurce PR 00909.

- e. Identification of possible exceptions to compliance, any periods which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (CAM) occurred; and
 - f. Such other facts as the Board may require to determine the compliance status of a source.
- 7- **Regulation Compliance:** As specified under Rule 115 of the RCAP, any violation to said Regulation, or to any other applicable rule or regulation, shall be grounds for the Environmental Quality Board (EQB) to suspend, modify, or revoke any relevant permit, approval, variance or other authorization issued by the EQB according to the Law of Uniform Administrative Procedures.
- 8- **Location Approval:** As specified under Rule 201 of the RCAP, nothing in this permit shall be interpreted as authorizing the location or construction of a major stationary source, or the modification of a major stationary source, or a major modification of a significant source, without obtaining first a location approval from the Board and without first demonstrating compliance with the National Ambient Air Quality Standards (NAAQS). This permit does not allow the construction of new minor sources without the required permit under Rule 203 of the RCAP.
- 9- **Open Burning:** As specified under the Rule 402 of the RCAP, the permittee shall not cause or permit the open burning of refuse in their premises except as established under Rule 402 (E) of the RCAP to conduct training or research of fire fighting techniques, as previously approved by the Board.
- 10- **Objectionable Odors:** As specified under Rule 420 of the RCAP, the permittee shall not cause or permit emissions to the atmosphere of any matter which produces an *objectionable* odors that can be perceived in an area other than that designated for industrial purposes. (This condition is enforceable only by the State.)
- 11- **Permit Renewal Applications:** As specified under the Rule 602(a)(1)(iv) of the RCAP, the permittee's applications for permit renewal shall be submitted at least twelve (12) months prior to the date of permit expiration. A responsible official must certify all required applications consistent with paragraph (c)(3) of Rule 602 of the RCAP.
- 12- **Permit Duration:** As specified under Rule 603 of the RCAP, the following terms will apply during the duration of this permit:
- (a) Expiration: This authorization shall have a fixed term of five (5) years. The expiration date will be automatically extended until the Board approves or denies

a renewal application (Rule 605(c)(4)(ii) of the RCAP) but only in those cases where the permittee submits a complete renewal application at least twelve (12) months before the expiration date. (Rule 603 (a)(2), Rule 605 (c)(2) and Rule 605 (c)(4) of the RCAP)

- (b) Permit Shield: As specified under Rule 605 (c)(4)(i) of the RCAP, the permit shield may be extended until the time it is renewed if a timely and complete renewal application is submitted.
- (c) In the case that this permit is subject to any challenge by third parties, the permit shall remain in effect until the time it is revoked by a court of law with jurisdiction in the matter.

13- **Recordkeeping Requirement:** As specified under Rule 603(a)(4)(ii) of the RCAP, the permittee shall retain all required monitoring data and supporting information for a period of five (5) years from the date of the monitoring sample, measurement, report or application. The permittee shall maintain readily accesible at the facility, copies of all records of required monitoring information that include the following:

- i. The date, place as defined in the permit, and time of sampling or measurements;
- ii. The date(s) analyses were performed;
- iii. The company or entity that performed the analysis;
- iv. The analytical techniques or methods used;
- v. The results of such analysis; and
- vi. The operating conditions as existing at the time of sampling or measurement.

14- **Reporting Requirement:** As specified under Rule 603(a)(5)(i) of the RCAP, PREPA Daguao shall submit the semi-annual reports of all required monitoring on October 1st and April 1st of every year, respectively, or more frequently if required by the EQB or any other underlying applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official as established under Rule 602(c)(3) of the RCAP.

15- **Deviations Reporting due to Emergencies:** According to Rule 603(a)(5)(ii) of the RCAP, any deviation resulting from an upset (such as sudden malfunction or break-down) or emergency conditions, as defined in Rule 603(e) of the RCAP, must be reported within the next 2 working days of the time when emission limitations were exceeded due to the emergency, if PREPA Daguao wishes to assert the affirmative defense authorized under Rule 603(e) of the RCAP. If PREPA Daguao raises the emergency defense upon an enforcement action, the permittee shall demonstrate that such deviation occurred due to an emergency and that the Board was adequately notified. If such emergency deviation

lasts for more than 24 hours, the affected units may be operated until the end of the cycle or 48 hours, whichever occurs first. The Board may only extend the operation of an emission source in excess of 48 hours, if the source demonstrates to the Board's satisfaction that the National Air Quality Standards have not been exceeded and that there is no risk to the public health.

- 16- **Deviation Reporting (Hazardous Air Pollutants):** The source shall act as specified in its Emergency Response Plan (established in Rule 107 (C) of the RCAP), when such Plan has demonstrated that there is no significant impact at the fenceline or shall shut down its operations immediately if there is a significant impact at the fenceline. (This condition is state-enforceable only). Pursuant to Rule 603 (a)(5)(ii)(b), a notification will be required if a deviation occurs that results in the release of emissions of hazardous air pollutants for more than an hour in excess of the applicable limit. The permittee shall notify the Board within 24 hours of the deviation. For the discharge of any regulated air pollutant that continues for more than 2 hours in excess of the applicable limit, the Permittee shall notify the Board within 24 hours of the deviation. The Permittee shall also submit to the Board, within 7 days of the deviation, a detailed written report which includes probable causes, time and duration of the deviation, remedial action taken, and steps which are being taken to prevent a reoccurrence.
- 17- **Severability Clause:** As specified under Rule 603(a)(6) of the RCAP, the clauses in this permit are severable. In the event of a successful challenge to any portion of the permit in an administrative or judicial forum, or in the event any of its clauses is held to be invalid, all other portions of the permit shall remain valid and effective, including those related to emission limits, terms and conditions, be they specific or general, as well as monitoring, record keeping and reporting requirements.
- 18- **Permit Noncompliance:** As specified under Rule 603(a)(7)(i) of the RCAP, the permittee must comply with all conditions of the permit. Permit noncompliance constitutes a violation of the RCAP and will be grounds for taking the appropriate enforcement action, impose sanctions, revoke, terminate, modify, and/or reissue the permit, or to deny a permit renewal application.
- 19- **Defense not Allowed:** As specified under Rule 603(a)(7)(ii) of the RCAP, 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.
- 20- **Permit Modification and Revocation:** As specified under Rule 603(a)(7)(iii) of the RCAP, the permit may be modified, revoked, reopened, reissued, or terminated for cause according to the Law of Uniform Administrative Procedures. The filing of a request by

the owner or operator of the installation for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

- 21- **Property Rights:** As specified under Rule 603(a)(7)(iv) of the RCAP, this permit does not convey any property rights of any sort, nor does it grant any exclusive privilege.
- 22- **Obligation to Furnish Information:** As specified under Rule 603(a)(7)(v) of the RCAP, the permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of documents related to this permit.
- 23- **Changes in Operating Scenarios:** As specified under Rule 603(a)(10)(i) of the RCAP, the permittee shall be record in a logbook, contemporaneously with making a change from one operating scenario to another authorized in **Section VI** of this permit, the scenario under which it is operating. This logbook must be kept at the permittee's facility at all times.
- 24- **Prohibition on Default Issuance:** As specified under Rule 605(d) of the RCAP, it shall never be considered that a permit has been issued by default as a result of the Board's failure to take final action on a permit application within eighteen (18) months. The Board's failure to issue a final permit within eighteen (18) months should be treated as a final action solely for the purpose of obtaining judicial review in a state court.
- 25- **Administrative Permit Amendments and Permit Modifications:** As specified under Rule 606 of the RCAP, the permit shall not be amended nor modified unless the permittee complies with the requirements for administrative permit amendments and permit modifications as described in the RCAP.
- 26- **Permit Reopenings:** As specified under Rule 608(a)(1), this permit shall be reopened and revised under the following circumstances:
 - (A) Whenever additional applicable requirements under any law or regulation become applicable to the permittee, when the remaining permit term is of three (3) or more years. Such reopening shall be completed eighteen (18) months after promulgation of said applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to Rule 605(c)(4)(i) or Rule 605(c)(4)(ii) of the RCAP.

- (B) Whenever the EQB or the EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of the permit.
- (C) Whenever the EQB or the EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
- 27- **Changes in Name or Responsible Official:** This permit is issued to **Puerto Rico Electric Power Authority – PREPA Daguao Turbine Power Block**. In the event that the company and/or installation change its name, the responsible official must submit an administrative amendment to this permit to reflect the change in name. If the event that the responsible official changes, the new responsible official must submit no later than 30 days after the change, an administrative amendment including a sworn statement in which he/she accepts and promises to comply with all the conditions of this permit.
- 28- **Changes in Ownership:** This permit is issued to **Puerto Rico Electric Power Authority – PREPA Daguao Turbine Power Block**. In the event that the company and/or installation is transferred to a different owner or change operational control and the Board determines that no other change in the permit is necessary, the new responsible official must submit an administrative amendment. The administrative amendment shall include a sworn statement in which the new responsible official accepts and promises to comply with all the conditions of this permit, and a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee. This is not applicable if the Board determines that changes to the permit are necessary.
- 29- **Renovation Work:** The permittee shall comply with the provisions set forth in 40 CFR §61.145 and §61.150, and Rule 422 of the RCAP when doing renovation or demolition activities of asbestos containing materials at the facility.
- 30- **Compliance Clause:** Under no circumstances does compliance with this permit exempt PREPA Daguao from complying with all other applicable state or federal laws, regulations, permits, administrative orders or applicable court orders.
- 31- **Requirements for Refrigerants (Climatologic and Stratospheric Ozone Protection):**
- a) In the event that the permittee has equipment or appliances, including air conditioning units, which use Class I or II refrigerants as defined in 40 CFR 82, Subpart A, Appendices A and B, he/she shall take the necessary measures to ensure that all maintenance, service or repair services performed are done so

according to the practices, certification and personnel requirements, disposition requirements, and recycling and/or recovery equipment certification requirements specified under 40 CFR 82, Subpart F.

- b) Owners/ operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- c) **Service on Motor Vehicles:** If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term motor vehicle as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo or system used on passenger buses using HCFC-22 refrigerant.

32- **Labeling of Products Using Ozone-Depleting Substances:** PREPA Daguao shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, subpart E.

- a) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.
- b) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
- c) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
- d) No person may modify, remove or interfere with the required warning statement except as described in §82.112.

33- **Risk Management Plan (RMP):** If during the effectiveness of this permit, PREPA Daguao is subject to the 40 CFR Part 68, PREPA Daguao shall submit a Risk Management Plan (RMP) according with the compliance schedule in the 40 CFR part 68.10. shall be presented. If during the effectiveness of this permit, PREPA Daguao is subject to the 40 CFR Part 68, PREPA Daguao shall submit a compliance certification

with the requirements of part 68 as part of the annual compliance certification required under 40 CFR part 70, including the recordkeeping and the RMP.

- 34- **General Duty Requirements:** PREPA Daguao has the general obligation of identifying hazards which may result from accidental releases of any controlled substance under section 112 (r) of the Clean Air Act or any other extremely hazardous substance in a process, using appropriate hazard assessment techniques, designing, maintaining and operating a safe facility and minimizing the consequences of accidental releases if they occur as required in section 112(r)(1) of the Act and Rule 107(D) of the RCAP.
- 35- **Roof Surface Coating:** This is a state-only requirement. PREPA Daguao shall not cause or permit the roof surface coating by applying hot tar or any other coating material containig organic compounds without previous nification to the Board. The use of used oil or hazardous waste for roof surface coating is prohibited.
- 36- **Emergency Electric Generators:**
- a) The operation for each emergency electric generators identified as insignificant activities are limited to 500 hours per year.
 - b) The permittee shall keep a monthly record of the hours of operation and fuel consumption for each emergency electric generator. It shall be kept available at any time for inspection by EQB and EPA personnel.
- 37- **Particulate Fugitive Emissions:** As established in Rule 404 of the RCAP, PREPA Daguao shall not cause or permit:
- a) any materials to be handled, transported or stored in a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent particulate matter from becoming airborne.
 - b) the discharge of visible emissions of fugitive dust beyond the boundary line of the property on which the emissions originate.
- 38- **Storage Tanks:** PREPA Daguao shall keep records of all fuel oil storage tanks listed as insignificant activities showing the dimensions of each tank and an analysis showing the capacity of each tank pursuant to the 40 CFR §60.116b. This documentation shall be readily available at any time for inspection of EQB personnel and shall be kept onsite for the life of the tank.

- 39- **Emissions Calculations:** PREPA Daguao shall submit, on the first day of April each year, the actual or permissible emissions calculations for the previous natural year. The emissions calculations shall be submitted on the forms prepared by the Board for this purpose and the responsible official must certify all the information submitted as true, correct and representative of the permitted activity.
- 40- **Annual Fee:** As specified under Resolution R-06-17-8², **Puerto Rico Electric Power Authority** shall pay an annual fee of **\$1,500,000.00**, for all of the facilities included in the agreement between the Environmental Quality Board and Puerto Rico Electric Power Authority. This annual fee shall be submitted in two terms, the first payment must be submitted, on or before June 30 and the second payment, on or before December 30 of each year.
- 41- **New or Amended Regulation:** Whether a federal or state regulation is promulgated or amended and the facility is affected by it, the owner or operator shall comply with the requirements of the new or amended regulation.
- 42- **Combustion Turbines:** Any existing, new or reconstructed source that have or operate stationary combustion turbines is subject to the National Emission Standards for Hazardous Air Pollutants for combustion turbines contained in the 40 CFR part 63, Subpart YYYY. Unless it is determined that this regulation is not applicable to PREPA Daguao, the affected source must comply with the applicable emission limitations and/or operating limitations of this subpart on or before March 4, 2004 if the source startup before this date or upon startup if your new or reconstructed affected source startup after this date, or by the date specified in an extension of compliance granted according to 40 CFR §63.6(i). Unless it is determined that this regulation does not apply, PREPA Daguao shall comply with the applicable notification requirements of 40 CFR §63.6145 and 40 CFR part 63, Subpart A by the dates specified.
- 43- **Reciprocating Internal Combustion Engines:** Any existing, new or reconstructed source that operates a stationary Reciprocating Internal Combustion Engines (RICE)³ with a site-rating of more than 500 brake horsepower (HP) is subject to the National Emission Standards for Hazardous Air Pollutants for stationary Reciprocating Internal Combustion Engines contained in the 40 CFR part 63, Subpart ZZZZ. Unless it is determined that this regulation is not applicable to PREPA Daguao or the source is exempted, the affected source must comply with the applicable emission limitations and/or operating limitations of this subpart; on or before June 15, 2007 for an existing stationary RICE, no later than August 16, 2004 if you start up your new or reconstructed

2 Resolution R-06-17-8 (Solicitud de interpretación de Resolución RO-06-2 sobre Pago de los cargos de operación para permisos Título V) issued on June 5, 2006.

3 As defined on 40 CFR, §63.6585(a).

stationary RICE before August 16, 2004, upon start up if your new or reconstructed RICE start up after August 16, 2004, or by the date specified in an extension of compliance granted according to 40 CFR §63.6(i). PREPA Daguao shall comply with the applicable notification requirements of 40 CFR §63.6645 and in 40 CFR part 63, subpart A by the dates specified.

- 44- **Reports:** Any requirement of information submittal to the Board shall be addressed to: Manager, Air Quality Area, P. O. Box 11488, San Juan, P.R. 00910.
- 45- **Reservation of Rights:** Except as expressly provided in this Title V permit:
- a) Nothing herein shall prevent EPA or the Board from taking administrative enforcement measures or seeking legal or equitable relief to enforce the terms of the Title V permit, including but not limited to the right to seek injunctive relief, and imposition of statutory penalties and fines.
 - b) Nothing herein shall be construed to limit the rights of EPA or the Board to undertake any criminal enforcement activity against PREPA Daguao or any person.
 - c) Nothing herein shall be construed to limit the authority of EPA or the Board to undertake any actions in response to conditions that present an imminent and substantial endangerment to public health or welfare, or the environment.
 - d) Nothing herein shall be construed to limit PREPA Daguao' rights to administrative hearing and judicial appeal of termination/ revocation/ disputes over modification/ denial actions in accordance with regulations and the Environmental Public Policy Act.

Section IV- Allowable Emissions

The allowable emissions authorized under this permit are mentioned below. The source shall certify annually that its actual emissions do not exceed the allowable emissions. This certification shall be based on the actual operation of the natural previous year and using the emission factors of AP-42 (Compilation of Air Pollutant Emission Factors) effective at the time of completing the TV application, that their emissions do not exceed the permissible emissions.

Criteria Pollutant	Allowable Emissions (tons /year)
PM ₁₀	9.41
SO ₂	395.87
NO _x	689.83
CO	2.59
VOC	0.32
Lead	0.011
HAP	0.9653

Section V- Permit Conditions

A. Normal operating scenario

The following table contains a summary of all applicable requirements, as well as the test methods, for all emission units identified in Section II of this permit.

1. DAGT-1 and DAGT-2 - Combustion turbines

Condition	Parameter	Value	Units	Test Method	Method Frequency	Record keeping Requirements	Reporting Frequency
Emission limit for particulate matter	Particulate matter	0.3	Lb/MMBtu	Fuel type and AP-42 emissions calculations	Monthly	Record book of fuel type and emissions calculations	Fuel Consumption Limit
Opacity limit	Opacity	20	Percent (6 minutes average)	Method 9	Once during the first year of permit approval.	Tests results	Semiannually
				Visible emissions inspections	Every 14 days	Record book	Semiannually
SO ₂ emission limit	Sulfur Content	≤0.5	Percent by weight	Fuel supplier certification	With each receipt	Record with each receipt of the sulfur content on fuel	Monthly
Fuel Consumption Limit	No. 2-Distillate Oil (diesel)	11,613,333 Gallons per year	Gallons per year	Consumption	Daily	Record book	Monthly

a. PARTICULATE MATTER EMISSION LIMIT:

- (i) The permittee shall not cause nor permit the emission of particulate matter, from any equipment burning solid or liquid fuel, in excess of 0.3 lb/MMBtu. [Rule 406 of the RCAP]
- (ii) PREPA Daguao shall calculate the emissions of particulate matter monthly using applicable AP-42 (Compilation of Air Pollutant Emission Factors) emission factors to the unit and the average rate of fuel heat input.
- (iii) PREPA Daguao shall also maintain in the facility a monthly report of the type of fuel used. Copy of these reports shall be submitted every six months along with the semi-annual report required in condition 14 of Section III of this permit.
- (iv) As specified in Rule 603(a)(4)(ii) of the RCAP, the permittee shall retain all records for required monitoring and supporting information for a period of five (5) years from the date of the monitoring sample, measurement, report or application.

b. VISIBLE EMISSIONS LIMIT:

- (i) The permittee shall not exceed the opacity limit of 20% for units DAGT-1 and DAGT-2 in six (6) minutes average. Nevertheless, the permittee may discharge into the atmosphere visible emissions of an opacity up to 60% for a period of no more than four (4) minutes in any consecutive thirty (30) minutes interval. [Rule 403(A) of the RCAP]
- (ii) The permittee shall keep a copy of the fuel supplier certification indicating the fuel sulfur content to demonstrate compliance with the requirement of keeping a daily record of the sulfur content in the no. 2 fuel oil. PREPA Daguao shall sample the fuel upon every delivery at the site for transfer to the storage tanks at the facility from any other source to verify sulfur content from supplier's invoice.
- (iii) PREPA Daguao shall perform opacity visual inspections every 14 days during the hours of the day using a visible emissions reader certified by a school approved by EPA or the Board. When the certified reader establishes that the opacity limit is exceeded according to Rule 403 of RCAP, PREPA Daguao shall verify that the equipment causing the visible emissions is operating in accordance with the specifications of the manufacturer and the conditions of the permit. If it is not operating adequately, PREPA Daguao shall take corrective actions to eliminate the excess of opacity immediately, and shall document the cause of the emissions with such elevated opacity, shall correct any deficiency and shall document the taken steps to correct any deficiency. PREPA Daguao shall realize tests of

visible emissions every fourteen (14) days in accordance with the requirements listed below:

- (A) The visible emissions readings shall be performed in accordance with 40 CFR Part 60 Method 9, Appendix A, for a minimum of six minutes. The visible emissions readers shall be certified according to Method 9 by a school approved by the EPA or the Board.
 - (B) All visible emissions readings shall be recorded in accordance with Method 9.
 - (C) If the day that corresponds to take the reading, the unit is not in operation or the conditions of Method 9 are not complied, PREPA Daguao shall document it in the report of readings and inform it in the visible emissions summary to be submitted to the Board along with the semi-annual reports required in this permit. The next readings shall be realized every 14 days.
 - (D) PREPA Daguao shall submit a summary of the readings of visible emissions along with the semi-annual report required in this permit. This report shall include a summary of the results of the readings and the beginning and ending hours and the dates in which the readings were performed. The report shall indicate if the unit were not operating the day that correspond to perform the readings of visible emissions or that is not comply with the conditions of Method 9. The report also shall include the total number of the readings of visible emissions realized in that period for the units subject to this requirement. PREPA Daguao shall retain a copy of the report of the reading of visible emissions that include date and the hour of the reading by at least five (5) years, in compliance with the Rule 603(A)(4)(ii) of the RCAP.
- (iv) PREPA Daguao shall submit to the Board, a copy of the format to be used to record the readings of visible emissions at least thirty (30) days prior to the reading of the initial opacity reading.
 - (v) The permittee shall notify in writing the Board at least fifteen (15) days of prior of the initial reading of Method 9, to allow the EQB the opportunity to have an observer present. [Rule 106 (D) of the RCAP]
 - (vi) Two (2) copies of the report of the initial reading under Method 9 shall be submitted by the permittee within 60 days after the tests. This report shall contain the information required in Rule 106 (E) of the RCAP. The requirements of the subsequent readings shall be submitted in the summary of readings that shall be submitted with the semi annual report required in this permit.

c. SULFUR CONTENT LIMIT:

- (i) The permittee shall not burn or allow the use in any fuel burning equipment, any fuel with a sulfur content, by weight, which exceeds 0.5% in the two (2) oil-fired combustion turbines (DAGT-1 and DAGT-2). [Rule 410 of the RCAP]
- (ii) The permittee shall keep a copy of the fuel supplier certification indicating the fuel sulfur content to demonstrate compliance with the requirement of keeping a daily record of the sulfur content in the no. 2 fuel oil. PREPA Daguao shall obtain this certification of the sulfur content with each receipt of fuel at the facility before the transference to the turbines to verify the sulfur content to be received.
- (iii) The permittee shall submit to EQB a monthly report indicating the daily fuel consumption and the sulfur content, by weight, for the fuel consumed in the two (2) oil-fired combustion turbines. This report shall be submitted to the Board within the first thirty (30) days of the month following for which the report is representative. The report shall be addressed to the Chief of the Validations Data and Mathematical Model Division and shall keep available at any time at the facility for EQB and EPA revision. [Rule 410 of the RCAP]
- (iv) As specified in Rule 603(a)(4)(ii) of the RCAP, the permittee shall retain all records of required monitoring data and supporting information for a period of five (5) years from the date of the monitoring sample, measurement, report or application. These include a record of the monthly fuel consumption and the sulfur content in the fuel burned.
- (v) The permittee shall submit, with each annual compliance certification, a summary of the reports for that year indicating the sulfur content by weight for the fuels consumed monthly.

d. FUEL CONSUMPTION LIMIT:

- (i) The permittee shall not exceed the consumption limit for No. 2 fuel oil of **11,613,333 gallons** for any period of twelve (12) consecutive months for the two (2) oil-fired combustion turbines (DAGT-1 and DAGT-2). The fuel consumption for any consecutive 12-month period shall be calculated by adding the monthly consumption for the unit to the total fuel consumption for the unit for the previous 11 months.
- (ii) The levels of the fuel tank must be measured monthly and the amount of fuel that is received must be measured and recorded each time that the fuel is received. The amount

of fuel consumption will be determined using the measurement in the levels of tank and the amount of fuel is received during this month.

- (iii) As specified in Rule 603(a)(4)(ii) of the RCAP, the permittee shall retain all records of required monitoring data and supporting information for a period of five (5) years from the date of the monitoring sample, measurement, report or application. These include a records of the monthly and annual fuel consumption reports.
- (iv) The permittee shall submit, with each annual compliance certification, an annual report summary indicating the fuel consumption of each turbine in term of the monthly and annual consumption.

Section VI- Alternative Operating Scenarios

- A. **For the Alternative Operating Scenario 1:** PREPA Daguao is allowed to fire natural gas or propane as a primary or igniter fuel in Units DAGT-1 and DAGT-2 after a construction permit process under Rule 203 of the RCAP has been approved. If the change to this scenario results in a significant emission as defined in Rule 102 of the RCAP, the permittee shall obtain the approval of location in accordance to Rule 201 of RCAP before operating under this scenario. If the change of this scenario is considered affected by Prevention of Significant Deterioration (PSD), the permittee shall obtain a federal permit of pre-construction (PSD) before operating under this scenario. When operating under this scenario, the permittee shall comply with all the conditions imposed in the construction permit issued for this change and its subsequent revisions. Furthermore, the permittee shall incorporate to this Title V operation permit, the construction permits and the revisions issued, according to Rule 606 of RCAP. For the Alternative Operating Scenario 1, PREPA Daguao shall comply with all the applicable requirements (monitoring, test methods and reporting) of the Normal Operating Scenario in Section V of this permit.

Section VII – Recordkeeping Requirements

- A. PREPA Daguao must prepare and update on a monthly basis the records of the hours of operation and fuel use for each combustion equipment included in Section IX of this permit.
- B. PREPA Daguao shall have available at all times in the facility a copy of the Emergency Plan required under Rule 107 of the RCAP.

- C. PREPA Daguao must keep a record of all research or training related firefighting activities.
- D. PREPA Daguao must keep a record of the purchases of refrigerant and the refrigerant added to the devices or equipment that generally have 50 lbs of refrigerant or more. [40 CRF §82.166]
- E. PREPA Daguao must keep available documents that establish the dimensions of the storage tanks and an analysis showing their capacity as specified in 40 CRF §60.116b. This required record will be kept at the installation while the source is in operation.
- F. All monitoring records, results of the fuel sampling tests, results of the calibration tests, charts prepared by instrumentation, all the reports submitted and the logs must be kept for a period of 5 years after the date they are recorded and shall be made available at the request of the EPA or the EQB.
- G. PREPA Daguao must write down in a record, contemporaneously with the change from one scenario to another authorized under Section VI of this permit, the scenario under which it is operating. The record shall be kept at the PREPA Daguao facility at all times.
- H. The levels of the fuel tanks must be measured on a monthly basis and the amount of fuel received shall be measured and written down every time fuel is received. The amount of fuel consumed shall be determined using tank level measurements and the amount of fuel received during the corresponding month.

Section VIII - Reporting Requirements

- A. **Certification of Compliance:** In accordance with Rule 602(C)(2)(ix)(c) of the RCAP, PREPA Daguao shall submit an annual certification of compliance. This certification shall be submitted to both the EQB and the EPA⁴ no later than April 1st of each year, covering the previous calendar year. The certification of compliance must include, but shall not be limited to, the information required in Rule 603(c) of the RCAP.

⁴ The EQB certification must be addressed to: Manager, Air Quality Area, Box 11488, San Juan, PR 00910. The EPA certification must be addressed to: *Chief, Enforcement and Superfund Branch*, CEPD, US EPA Region II, Centro Europa Building, 1492 Ponce de León Ave., Stop 22, Santurce, PR 00909.

- B. Calculation of Emissions: No later than April 1st of each year PREPA Daguao shall send the calculations of the actual emissions for the previous calendar year. The estimate of emissions shall be provided in the forms prepared by the EQB for such purposes. The responsible official will certify that all the information submitted is correct, true and representative of the permitted activity. Emission calculations must include, but not be limited to, PM/PM10, NO_x, VOC, CO, Pb, SO_x and HAP emissions.
- C. In Accordance with Rule 603(a)(5)(i) of the RCAP, PREPA Daguao shall submit biannual reports of the required sampling, on October 1st and April 1st of each year, respectively, or more frequently if required by the underlying applicable requirements or by the Board. All instances of deviations from permit requirements must be clearly identified in such reports. The responsible official must certify all required reports as established under Rule 602(c)(3) of the RCAP.
- E. Monthly Reports of Fuel Consumption: Units DAGT-1 and DAGT-2 are affected by Rule 410 of the RCAP, therefore PREPA Daguao must submit, on a monthly basis, a report indicating sulfur content by percent by weight and daily fuel consumption for each unit. The report must be submitted to the Board to the attention of the head of the Validation and Data Management Division during the first 30 days of the month following the month for which it is representative.
- F. In accordance with rule 603 (a)(5)(ii) of the RCAP, any deviations resulting from upset conditions (just as fault or unexpected rupture) or from emergency as defined in section (e) of Rule 603 of RCAP shall be reported within two (2) working days.
- G. In accordance with rule 603 (a)(5)(ii)(b) of the RCAP, PREPA Daguao shall notify the Board within 24 hours of any deviation that results in a release of hazardous air pollutant that continues for more than one hour in excess of the applicable limit. In case of a release of any other regulated air pollutant that continues for more than 2 hours in excess of the applicable limit, the Board will be notified within 24 hours of the deviation. PREPA Daguao shall also submit to the Board, within 7 days, a written detailed report which includes probable causes, time and duration of the deviation, remedial action taken, and steps which are being undertaken to prevent a reoccurrence. (State enforceable only.)
- H. PREPA Daguao shall submit one to the EPA and two to the EQB of the written report of the results of all emission samplings within 60 days after performance of the emission tests. [Rule 106(E) of the RCAP]

- I. PREPA Daguao must comply with the applicable notification requirements of 40 CFR §63.6145 and 40 CFR part 63, subpart A by the dates specified unless it is determined that these rules do not apply.
- J. PREPA Daguao must comply with the applicable notification requirements of 40 CFR §63.6645 and 40 CFR part 63, subpart A by the dates specified.

Section IX - Insignificant Emission Units

PREPA Daguao provided the following list of insignificant activities for a better understanding of its operations and layout. Since there is no requirement to update this list, activities may have changed since this filing; however, PREPA Daguao must include the list for insignificant activities, which are exempted because of size or production rate, and some may need a construction permit under Rule 203 of the RCAP.

Emission Unit ID	Description (Basis for exemption)
Tanks DATK1 (11,221 Bbls)	Less than 1 ton/yr of VOC [Appendix B(3)(ii)(P) of RCAP].
Fuel oil truck unloading	Less than 1 ton/yr of VOC [Appendix B(3)(ii)(P) of RCAP].
Lube oil tanks within turbine housing (2)	Less than 10,000 gallons [Appendix B(3)(ii)(N) of RCAP].
Gas turbine start up engines (2)	Less than 1 ton/yr of VOC, CO, PM ₁₀ , and NO _x and less than 2 ton/yr of SO ₂ [Appendix B(3)(ii)(P) of RCAP]
Gas turbines fuel tank (2)	Less than 10,000 gallons [Appendix B(3)(ii)(N) of RCAP].

Section X - Permit Shield

- A. As specified under Rule 603(D) of the RCAP, compliance with the conditions of the permit shall be deemed compliance with any applicable requirement as of the date of permit issuance, but only if such applicable requirement is included and specifically identified in the permit. Moreover, the permittee shall be deemed in compliance with any other requirement specifically identified in the permit as Non Applicable.

1. Non Applicable Requirements for Emission Units DAGT-1 and DAGT-2

Non applicable requirements		
State	Federal	Reason
Hazardous Air Pollutant Limits		See Section X(A)(2) of this Permit
	Standards of Performance for Stationary Gas Turbines (40 CFR 60, Subpart GG)	See Section X(A)(2) of this Permit

2. Reasons for Non Applicability

Coding for Non Applicability	
Code	Reason
Hazardous Air Pollutant Limits	No applicable requirements
40 CFR 60 Subpart GG	Not applicable to sources built before October 3, 1977. Emission units (DAGT-1 and DAGT-2) are not affected by this standard because they were built in 1974.

B. The permit shield covers any alternative operating scenario as long as it is defined and allowed under the conditions of this permit.

Section XI - Permit Approval

Pursuant to the powers granted to the Environmental Quality Board by the Environmental Public Policy Act, Public Law Number 416 of September 22, 2004, as amended, and after verifying the administrative record and in compliance with the Uniform Administrative Procedures Act, Public Law Number 170 of August 12, 1998, as amended, the US Clean Air Act, the Puerto Rico Environmental Public Policy Act and the Environmental Quality Board Regulations for the Control of Atmospheric Pollution, the Environmental Quality Board approves the permit and the terms and conditions stipulated therein.

PREPA Daguao Turbine Power Block
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In San Juan, Puerto Rico, **April 28, 2010.**

ENVIRONMENTAL QUALITY BOARD

/s/

Wanda E. García Hernández
Alternate Member

/s/

Eng. Ángel O. Berríos Silvestre
Associate Member

/s/

Pedro J. Nieves Miranda, Esq.
President

APPENDICES

Appendix A- Definitions and Abbreviations

I. Definitions:

1. **Permittee**-Person and/or entity to which the Puerto Rico Environmental Quality Board has emitted an Operating Permit for an Emission Source under Title V.
2. **Regulation**-Regulation for the Control of Atmospheric Pollution of the Environmental Quality Board.
3. **Responsible Official**-As defined in the Regulation for the Control of Atmospheric Pollution of the Environmental Quality Board.
4. **Title V**-Title V of the Clean Air Act (42 U.S.C. 7661)

II. Abbreviations:

1. **API**- American Petroleum Institute
2. **AP-42**- Compilation of Air Pollutant Emission Factors
3. **Btu**-British Thermic Unit
4. **CFR**-United States Code of Federal Regulations
5. **CO**-Carbon Monoxide
6. **EPA**-Environmental Protection Agency
7. **EQB**-Environmental Quality Board of Puerto Rico
8. **HAP**- Hazardous Air Pollutant
9. **HP**- Horsepower
10. **IP**- Institute of Petroleum
11. **MMBtu**- Million Btu
12. **NAAQS**-National Ambient Air Quality Standards
13. **NO_x**- Oxides of nitrogen
14. **OPM**- Operations and Preventive Maintenance

15. **PM-** Particulate matter
16. **PM₁₀**-Particulate matter with particulate has an aerodynamic mass equal or less than ten (10) microns.
17. **PREPA-** Puerto Rico Electric Power Authority
18. **PSD-** Prevention of Significant Deterioration
19. **QA-** Quality Assurance
20. **RCAP-** Regulations for the Control of Atmospheric Pollution of the Environmental Quality Board
21. **RMP-** Risk Management Plan
22. **SIC-** Standard Industrial Classification
23. **SO_x**- Sulfur Oxides
24. **SO₂**- Sulfur Dioxide
25. **VOC-**Volatile Organic Compound
26. **wt%-** weight percent