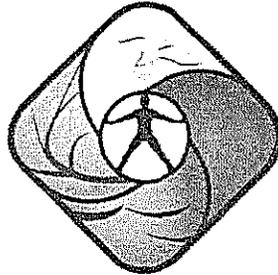




COMMONWEALTH OF
PUERTO RICO
 Environmental Quality Board

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



Permit Number:	PFE-TV-4911-63-0212-0244
Date of Receipt of the Renewal Application:	February 24, 2012
Final Issue and/or Effective Date:	April 15, 2015
Expiration Date:	April 15, 2015

Pursuant to the provisions of Part VI of the Environmental Quality Board Regulations for the Control of Atmospheric Pollution (RCAP) and the provisions of the Code of Federal Regulations (CFR), Title 40, Part 70:

**PUERTO RICO ELECTRIC POWER AUTHORITY
 PREPA AGUIRRE POWER STATION
 SALINAS, PUERTO RICO**

hereinafter **PREPA¹ AGUIRRE POWER STATION (PREPA Aguirre)** or the permittee, is authorized to operate a stationary source of air pollutant emissions limited to the units and conditions described in this permit. Until such time as this permit expires, is modified or revoked, **PREPA Aguirre** may release air pollutants resulting from processes and activities that are directly related to and/or associated with the emission sources, as required, limited or conditioned by this permit, until its expiration date or until the permit is modified or revoked.

The conditions in this permit shall be enforceable by the federal and state governments. Those requirements that may be enforced only by the state government shall be identified as such in this permit. Copy of this permit must be kept in the aforementioned facility at all times.

¹PREPA is Puerto Rico Electric Power Authority.

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Section I - General Information

A. Facility Information

Company Name: Puerto Rico Electric Power Authority

Postal Address: P.O. Box 364267

City: San Juan

State: Puerto Rico

Zip Code: 00936-4267

Email of the company: AEE-DPACC@aepr.com

Name of Facility: PREPA Aguirre Power Station

Location of the Facility: State Road PR-3 Km. 152.7
Ward Montesoria, Aguirre
Salinas, Puerto Rico

Responsible Official:  Carlos Castro Montalvo
Generation Director

Telephone: 787-521-6407, 787-521-6408, 787-521-6409

Fax: 787-521-6410

Technical Contact Person: Milton Ballester Colón
Head, Aguirre Steam Plant

William Ríos Mera
Head, Combined Cycle Plant

Ivan L. Monroig Morales
Supervisor Engineer, Gas Turbine Plant

Telephone: 787-521-3903

Fax: 787-521-3905

SIC Primary Code: 4911

B. Process Description

PREPA Aguirre is located in southeast Puerto Rico adjacent to the town of Aguirre in the Montesoria Ward (PR-3 Km 152.7) on Salinas. The facility consists of twelve fuel combustion sources located in one of the following three plant areas:

1. steam power plant consisting of two oil-fired steam electric (boilers) units (AG1 and AG2),
2. combined cycle power plant consisting of eight oil-fired gas turbines (CC1-1, CC1-2, CC1-3, CC1-4, CC2-1, CC2-2, CC2-3 and CC2-4) with two steam electric generators, and a
3. power block consisting of two oil-fired gas turbines (AGGT2-1 and AGGT2-2) of burning liquid fuel.

The two (2) boilers (AG1 and AG2) combust primarily No. 6 fuel oil (Bunker C) to produce steam used to generate electricity at a steam turbogenerator. The No. 6 fuel oil (Bunker C) is received by barge or ship and unloaded into four (4) on-site reserve tanks for storage. The No. 6 fuel oil (Bunker C) is transferred into two (2) service tanks which then are fed into the boilers for combustion. The combustion flue gases are exhausted to the atmosphere through two emission points for each boiler.

Propane from on-site tanks is used only during fuel oil burner start-up, and shutdown of the fuel oil burners in the boilers. During a boiler start-up, depending on boiler conditions, either No. 2 fuel oil or no. 6 fuel oil can be used to warm up the boiler. If No. 2 fuel oil is used for warm up, after the boiler have reached the desired conditions, No. 6 fuel oil is fired to continue the process.

The combined cycle plant consists of eight (8) combustion turbines or gas turbines that combust No. 2 fuel oil to generate electricity and steam. In turn, the combustion gases of the above process may be emitted into the atmosphere through its respective emission point or through a heat exchanger (Heat Recovery Steam Generator or HRSG), which produces the necessary steam to drive a steam turbine to produce additional electricity. The fuel oil no. 2 is received from barges or boats in six (6) reserve tanks. Fuel is then transferred to four (4) service tanks that feed the combustion process of the combined cycle turbines. The combination of four gas turbines and one steam turbine is known as a combined cycle unit. Each combustion turbine can operate in combined cycle mode (HRSG in operation) or in simple cycle mode (HRSG is not in operation). Each turbine has a stack and each heat recovery unit has a stack.

The power block consists of two (2) combustion turbines or gas turbines that combust fuel oil No.2 to generate electricity. Fuel oil No. 2 is received by barge or ship into six (6) reserve tanks. The fuel is then transferred into two (2) service tanks which feed the combustion process of the gas turbine units. Also, the service tanks can also receive fuel directly from fuel delivery trucks.

As a consequence of operating at its permit level, PREPA Aguirre is a major source because it has the potential to emit PM₁₀, SO_x, NO_x, VOC, CO in excess of 100 tons per year, nickel compounds and formaldehyde in excess of 10 tons per year, a combination of hazardous atmospheric pollutants in excess of 25 tons per year, and greenhouse gases (GHG) in excess of 100,000 tons per year, expressed as CO_{2e}.

Section II - Description of the Emission Units

The emission units regulated by this permit are as follows:

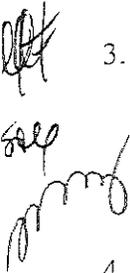
Emission Unit	Description	Control Equipment
AG1 and AG2	Two boilers that burn residual fuel with steam/turbo generators. The capacity of each boiler is 4,180 MMBtu/hr.	None
CC1-1, CC1-2, CC1-3, CC1-4, CC2-1, CC2-2, CC2-3 and CC2-4	Eight oil-fired combustion turbines with HRSG and steam turbogenerators. The capacity of each combustion turbine is 607.5 MMBtu/hr.	None
AGGT2-1 and AGGT2-2	Two oil-fired combustion turbines. The capacity of each turbine is 301.5 MMBtu/hr.	None
R5 and R6	Fixed roof storage tanks Stores: <i>fuel oil no. 2</i> . Each one has: Capacity of 321,000 bbl (13,482,000 gallons) Diameter: 219' Height: 48'	None
D1, D2, D3 and D4	Fixed roof service tanks Stores: <i>fuel oil no. 2</i> . Each one has: Capacity of 27,430 bbl (1,152,060 gallons) Diameter: 70' Height: 41'	None
LDR1 and LDR2	Fixed roof storage tanks Stores: <i>fuel oil no. 2</i> . Each one has: Capacity of 43,025 bbl (1,807,050 gallons) Diameter: 80' Height: 44-49'	None

CC1
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R5

Section III - General Conditions of the Permit

1. **Sanctions and Penalties:** The permittee is obligated to comply with all the 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, PREPA Aguirre 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 Aguirre shall be submit each year a compliance certification. This certification must be submitted to both the Board and the U.S. Environmental Protection Agency (EPA)² every year no later than the 1st of April, 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:

²The 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, City View Plaza II Building, Suite 7000th Floor, 48 Road 165 Km 1.2, Guaynabo, P.R. 00968-8069.

- 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 considered in the compliance certification; and
- c. Whether compliance was continuous or intermittent; and
- d. The methods or other means used for determining the compliance status of the source, with each term and condition, currently and over the reporting period, consistent with sections (a)(3) – (5) of the RCAP; and
- 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)³ occurred; and
- f. Such other facts as the Board may require to determine the compliance status of the source.

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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.
 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 *objectionable* odors that can be perceived in an area other than that designated for industrial purposes. (This condition is enforceable only by the State.)

³ CAM is Compliance Assurance Monitoring.

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.
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 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) of the RCAP, PREPA Aguirre shall retain all required monitoring data and supporting information for a period of 5 years from the date of the monitoring sample, measurement, report or application. PREPA Aguirre shall maintain readily accessible 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. **Semiannual Monitoring Reports/Samplings⁴:** As specified under Rule 603(a)(5)(i) of the RCAP, PREPA Aguirre shall submit the Board, the reports of all required monitoring, every six months 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. The report that covers the period from January to June shall be

⁴ These reports cover two major elements. The first element is the summary of all periodic monitoring / sampling required in this permit. The second element requires that all deviations from permit conditions are clearly identified, summarized and reported to the Board.

submitted no later than October 1st of the same year, and the report covering the period from July to December shall be submitted no later than April 1st of the next year. Once the guidelines are developed by the Board, the permittee must use them to complete these reports.

15. **Deviations Reporting due to Emergencies:** As specified under Rule 603(a)(5)(ii)(a) 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 from the time the emission limits are exceeded due to the emergency, if PREPA Aguirre wishes to assert the affirmative defense authorized under Rule 603 (e) of the RCAP. If PREPA Aguirre raises the emergency defense upon an enforcement action, the permittee shall demonstrate that such deviation happens due to an emergency and that the Board was adequately notified. If such emergency deviation last for more than 24 hours, the affected units may be operated until the end of the cycle or 48 hours, what 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.
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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 shown no significant impact on an area other than those that have been designated for industrial purposes or will cease operations immediately if there is a significant impact on an area other than those that have been designated for industrial purposes (state-only enforceable condition). In accordance with Rule 603(a)(5)(ii)(b) of the RCAP, he shall notify the Board within the next 24 hours if a deviation that results in the release of emissions of hazardous air pollutants for more than occurs an hour in excess of the applicable limit. 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. PREPA Aguirre shall 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 the steps you are following to prevent recurrence.
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, PREPA Aguirre shall not allege as a defense 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 PREPA Aguirre 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, PREPA Aguirre 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, PREPA Aguirre shall also furnish to the Board copies of documents related to this permit.
23. **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 18 months. The Board's failure to issue a final permit within 18 months should be treated as a final action solely for the purpose of obtaining judicial review in a state court.
24. **Administrative Permit Amendments and Permit Modifications:** As specified under Rule 606 of the RCAP, the permit shall not be amended nor modified unless PREPA Aguirre complies with the requirements for administrative permit amendments and permit modifications as described in the RCAP.
25. **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 PREPA Aguirre, 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.

26. **Changes in Name or Responsible Official:** This permit is issued to **Puerto Rico Electric Power Authority – Aguirre Power Station**. 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. In 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.

27. **Changes in Ownership:** This permit is issued to **Puerto Rico Electric Power Authority – Aguirre Power Station**. 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.

28. **Renovation Work/ Demolition:** The permittee shall comply with the provisions set forth in 40 CFR §61.145 and §61.150, and Rule 422 of the RCAP, and Regulations for the Processing of General Permits (General Permit for the Handling of Asbestos Containing Materials) when doing renovation or demolition activities of asbestos containing materials at the facility.

29. **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 Part 82, Subpart A, Appendices A and B, PREPA Aguirre 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 Part 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 PREPA Aguirre 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.

30. **Labeling of Products Using Ozone-Depleting Substances:** PREPA Aguirre 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.

31. **Compliance Clause:** Under no circumstances does compliance with this permit exempt PREPA Aguirre from complying with all other applicable state or federal laws, regulations, permits, administrative orders or applicable court orders.

32. **Annual Fee:** As specified under Resolution R-06-17-8⁵, **Puerto Rico Electric Power Authority** shall pay an annual fee of **\$1,500,000.00**, or the charge established by the Board through resolution 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.

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

⁵ 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.

34. **General Duty Requirements:** PREPA Aguirre 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. **Reports:** Unless stated otherwise specifically provided in a condition, 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.
36. **Particulate Fugitive Emissions:** As established in Rule 404 of the RCAP, PREPA Aguirre 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.
37. **Roof Surface Coating:** This is a state-only requirement. PREPA Aguirre shall not cause or permit the roof surface coating by applying hot tar or any other coating material containing organic compounds without previous notification to the Board. The use of used oil or hazardous waste for roof surface coating is prohibited.
38. **Storage Tanks:** PREPA Aguirre 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 Aguirre shall submit, on the first day of April of 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. **Amendments or New Regulations:** In case a new regulation is established or an existing one is amended (state or federal) and the Board determines that it applies to the facility, PREPA Aguirre shall comply with the provisions of this regulation or amendment within the time specified in the applicable state or federal regulations.

41. **Reservation of Rights:** Except as expressly provided in this 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 Aguirre 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 Aguirre's 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.

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Section IV - Permissible Emissions

A. The permissible emissions authorized under this permit are mentioned below. The source shall certify annually that its actual emissions do not exceed the permissible emissions. This certification shall be based on the actual operation of the previous calendar year (natural year)⁶ and using the emission factors of AP-42 (Compilation of Air Pollutant Emission Factors) effective at the time of completing the Title V application, that their emissions do not exceed the permissible emissions.

Pollutants	Permissible Emissions (tons /year)
PM	2,194.88
SO ₂	30,608.58
NO _x	28,867.78
CO	1,299.54
VOC	195.32
Lead	0.63
CO ₂ e	10,093,497.14

⁶ Calendar year (natural year) means 365 consecutive days commencing on January 1 and ending on December 31. This definition is under Regulation No. 6630 of June 4, 2003, Amendments to Regulations for the Control of Atmospheric Pollution (Rules 102 and 405).

Hazardous Air Pollutants (HAP's)	Permissible Emissions (tons /year)
Formaldehyde compounds	14.75
Manganese compounds	19.62
Chloride	84.71
Nickel compounds	20.71
Total HAP's ⁷	177.73

Section V - Specific Permit Conditions

A. Normal operating scenario: AG1 and AG2 (Oil-fired boiler with steam/turbogenerator)

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1. The following table contains a summary of applicable requirements, as well as the test methods, for emission units AG1 and AG2 identified in Section II of this permit. The permit conditions include additional applicable requirements.

Condition	Parameter	Value	Units	Test Method	Frequency	Record Keeping Requirements	Reporting Frequency
Particulate Matter Emission Limits	Particulate Matter	0.3	Lbs/MMBtu	Fuel type	Monthly	Fuel type	Monthly
				Method 5	During the first year of the permit.	Record	No later than sixty (60) days after the performance of the test
Fuel consumption limit	Fuel oil no. 6	488,229,840	Gallons per year	Consumption	Daily	Record	Monthly
	Propane (igniter fuel)	19,018.44	Gallons per year	Consumption	Daily	Record	Monthly
	Diesel (warm-up fuel)	803,405.40	Gallons per year	Consumption	Daily	Record	Monthly
Sulfur content limit	Fuel oil no.6 and fuel oil no. 2	0.50	Percent by weight	Fuel Analysis	With every fuel receipt and upon any fuel blending	Analysis results	Monthly

⁷ See all hazardous air pollutants in Appendix B.

Condition	Parameter	Value	Units	Test Method	Frequency	Record Keeping Requirements	Reporting Frequency
	Propane (igniter fuel)	0.0187	Percent by weight	Fuel Analysis	Supplier's certification with each receipt of fuel.	Analysis results	Monthly
Opacity Limit	20	Percent (6 minute average)	COMS and Oxygen CEMS Method 9	Continuous or no less frequent than every 15 seconds. Every two weeks	Data acquisition System with Backup Record book	See Permit Conditions	See Permit Conditions
Asphaltene content limit	8	Percent by weight	Fuel analysis	With every fuel receipt and upon any fuel blending	Analysis results	Record	Quarterly
Vanadium content limit	150	Ppmw	Fuel analysis	With every fuel receipt and upon any fuel blending	Analysis results	Record	Quarterly
Time Between Water Washings	18	Months	Calendar	One water wash per outage	One water wash per outage	Record	Quarterly

*Items below give explanatory details on tabulated parameter requirements.

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PARTICULATE MATTER EMISSION LIMIT:

- (i) The permittee shall not cause nor permit the emission of particulate matter, in excess of 0.3 lb/MMBtu of heat input from AG1 and AG2. [Rule 406 of the RCAP]
- (ii) The permittee shall perform a performance test on each unit during the first year of the permit using Method 5 of the 40 CFR part 60, Appendix A in order to verify compliance with the standard. [Rule 603(a)(3) of the RCAP].
- (iii) The permittee must submit a test protocol to EQB 30 days prior to the start of the test, a detailed test protocol describing all test equipment, procedures and Quality Assurance (QA) measures to be used. The protocol must be specific to the test, facility, operating conditions and parameters to be measured. [Rule 106 (C) of the RCAP]
- (iv) The permittee must submit a written notification 15 days prior of the performance test in order to allow EQB to assign an observer. [Rule 106 (D) of the RCAP]

(v) The permittee must submit two copies of the report of the initial reading under Method 5 within 60 days after the tests. This report shall contain the information required by Rule 106 (E) of the RCAP.

(vi) 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 5 years from the date of the monitoring sample, measurement, report or application.

b. FUEL CONSUMPTION LIMIT:

(i) PREPA Aguirre will be authorized to burn only fuel oil no. 6 for normal operation, fuel oil no. 2 for warm up and propane as fuel for ignition and shutdown of units AG1 and AG2 according to the following limits:

a. The permittee shall not exceed the total consumption limit for fuel oil no. 6 of **488,229,840 gallons** for any period of 12 consecutive months only for units AG1 and AG2. The consumption of fuel oil no. 6 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.

b. The permittee shall not exceed the total consumption limit for propane of **19,018.44 gallons** for any period of 12 consecutive months only for the ignition and shutdown of units AG1 and AG2. The consumption of propane 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.

c. The permittee shall not exceed the total consumption limit for fuel oil no. 2 of **803,405.40 gallons** for any period of 12 consecutive months only for the warm up of units AG1 and AG2. The consumption of fuel oil no. 2 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 AG1 and AG2 units are not allowed to burn solid fuels (for. ex. controlled substances, absorbent pads and wipes, industrial waste, etc.).

(iii) 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.

(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 5 years from the date of the monitoring sample, measurement, report or application. These shall include a record of the monthly and annual fuel consumption reports.

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- (v) The permittee shall submit, with each annual compliance certification, an annual report summary indicating the fuel consumption of each boiler in term of the monthly and annual consumption.

c. SULFUR CONTENT LIMIT:

- (i) To comply with Rule 403 of the RCAP, the permittee shall not burn or allow the use of any no. 6 fuel oil or lighter⁸ (Lighter means only fuel oil no. 2 for boilers warm up.) in Units AG1 and AG2, with a sulfur content which exceeds 0.50% by weight. [U.S. v. PREPA, Consent Decree⁹, Civil Action No. 93-2527 CCC]
- (ii) Only the use of propane gas for ignition and shutdown of the fuel oil burners of the AG1 and AG2 units is allowed. The permittee shall not burn or allow the use of propane in the two units with a sulfur content that exceeds 0.0187% by weight.
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(iii) The permittee, a service contractor retained by the permittee, or any other qualified agency shall sample the fuel and/or verify sulfur content from supplier's receipt or invoice upon every delivery for transfer to the facility's storage tanks. The fuel sampling shall include but not be limited to determining the fuel's sulfur content (% by weight). The compliance with the standard of sulfur content shall be determined using the methods established in ASTM 4294.
- (iv) Prior to combustion, the permittee shall analyze the composition of any fuel blended after the receipt of shipment (including but not limited to blending due to additions to reserve tanks or mixing of fuel from various plant locations). The fuel sampling shall include but not be limited to determining the sulfur content (% by weight). For propane fuel supplier, the permittee must obtain a certification with each receipt where the sulfur content (% by weight) is established.
- (v) For Units AG1 and AG2, the permittee shall submit a monthly report indicating on a daily basis the sulfur content (percent by weight) in the fuels burned or combusted by each unit during the reporting period and the amount of fuel burned at each unit. This report shall be submitted to EQB to the attention of the Chief of the Validation and Data Management Division of the Air Quality Area. All monthly reports shall be postmarked on or before the thirtieth (30th) day following the end of each calendar month. [Rule 410 of the RCAP]
- (vi) In accordance with Rule 603(a)(4)(i) of the RCAP, the permittee shall retain monitoring records that include:
- 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;

⁸ Lighter fuel means fuel oil no. 1, 2, 4 or 5.

⁹ Consent Decree, (Decree), signed in 1999 by the Federal Department of Justice, the Environmental Protection Agency (EPA) and the Authority, as part of the Civil Case No. 93-2527 (CC), United States of America vs. Power Authority of Puerto Rico Energy.

- 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.
- vii. For propane, the supplier's certification must be kept.

- (vii) In accordance with Rule 603(a)(4)(ii) of the RCAP, the permittee shall keep 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. This includes records of the sulfur content (% by weight) of received fuel shipments, and the sulfur content of consumed fuels.
- (viii) The permittee shall submit, with each semiannual compliance certification, a summary of the reports for that year indicating the sulfur content (% by weight).

d. OPACITY LIMIT:

- (i) In accordance with Rule 403(A) of the RCAP, the permittee shall not exceed the opacity limit of 20% (in 6-minute average), except for one period of not more than four (4) minutes in any consecutive thirty (30) minute interval when the opacity shall not exceed 60%.

- (ii) The permittee shall calibrate, maintain, and operate the following:

- (A) A continuous opacity monitoring system (COMS) to measure and record the percent opacity in each boiler exhaust stack; and
- (B) An oxygen continuous emission monitoring system (CEMS) to measure and record the percent oxygen in each boiler exhaust stream.

- (iii) The permittee shall perform bi-weekly readings of each emission point (Units AG1 and AG2) according to 40 CFR Part 60, Method 9. The readings shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. If opacity is measured at any time to be greater than 20%, either by a Method 9 visible emission reading or a COMS, all possible corrective actions shall be taken as soon as an exceedance of the opacity limit at Units AG1 and/or AG2 is observed.

- (iv) The permittee shall submit a written report of all excess emissions to EQB for every calendar quarter. All quarterly reports shall be postmarked on or before the 30th day following the end of each quarter and shall include the information specified below:

- (A) The magnitude of excess emissions computed in accordance with 40 C.F.R. §60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions;

- (B) The date and time identifying each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of the system repairs or adjustments;
 - (C) The optimal operating range(s) for the percent oxygen used during the quarter with the date(s) the ranges became effective;
 - (D) The oxygen CEMS readings at the times opacity exceeds 20% (in 6-minute average); and
 - (E) A written report of any oxygen measurements taken during optimization and verification studies along with opacity measurements.
- (v) Within thirty (30) days of the end of each calendar quarter, the permittee shall submit to the EQB all of the Method 9 reports for visible emissions readings taken during the previous quarter.
- ell* (vi) In accordance with 40 CFR §60.7(d), the summary report form shall contain the information and be in the format shown in figure 1 of 40 CFR §60.7(d), unless otherwise specified by the Administrator.
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mmmm (A) If the total duration of excess emissions for the reporting period is less than 1% of the total operating time for the reporting period and COMS downtime for the reporting period is less than 5% of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR §60.7(c) need not be submitted unless requested by the Administrator.
- (B) If the total duration of excess emissions for the reporting period is 1% or greater of the total operating time for the reporting period, or the total COMS downtime for the reporting period is 5% or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR §60.7(c) shall both be submitted.
- (vii) In accordance with Rule 603(a)(4)(i) of the RCAP, the permittee shall retain opacity and oxygen monitoring records that include:
- (A) The date, place as defined in the permit, and time of sampling or measurements;
 - (B) The date(s) analyses were performed;
 - (C) The company or entity that performed the analysis;
 - (D) The analytical techniques or methods used;
 - (E) The results of such analysis; and
 - (F) The operating conditions as existing at the time of sampling or measurement.
- (viii) In accordance with Rule 603(a)(4)(ii) of the RCAP, the permittee shall keep 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. This includes a record of visible

emissions readings by Method 9, COMS opacity records, and CEMS oxygen content records. Records shall contain the dates and times of inspections, as well as information about any corrective measures taken.

e. **ASPHALTENE CONTENT LIMITS:**

- (i) To assure compliance with Rule 403 of the RCAP and according to a February 3, 1994 agreement between the EQB and PREPA, the permittee shall not burn or allow the use of any fuel, in any fuel burning equipment, with an asphaltene content that exceeds 8% by weight.
- (ii) The permittee, a service contractor retained by the permittee, or any other qualified agency shall sample the fuel and/or verify asphaltene content from supplier's invoice upon every delivery for transfer to the facility's storage tanks. The fuel sampling shall include but not be limited to determining the fuel's asphaltene content (% by weight), using either method IP 143 or ASTM 3279 for compliance purposes.
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- (iii) Prior to combustion, the permittee shall analyze the composition of any fuel blended after the receipt of shipment (including but not limited to blending due to additions to reserve tanks or mixing of fuel from various plant locations). The fuel sampling shall include but not be limited to determining the asphaltene content (% by weight).
- (iv) For units AG1 and AG2, PREPA Aguirre shall submit a quarterly report indicating on a daily basis the asphaltene content (percent by weight) in the fuels burned or combusted and the amount of fuel burned at each unit. This report shall be submitted to the EQB to the attention of the Chief of the Validation and Data Management Division of the Air Quality Area. All quarterly reports shall be postmarked on or before the thirtieth (30th) day following the end of each calendar quarter.
- (v) In accordance with Rule 603(a)(4)(i) of the RCAP, the permittee shall retain monitoring records that include:
- 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.
- (vi) In accordance with Rule 603(a)(4)(ii) of the RCAP, the permittee shall keep all records of 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. This includes records of the asphaltene content (% by weight) of received fuel shipments, and the asphaltene content (% by weight) of consumed fuels.

(vii) The permittee shall submit, with each annual compliance certification, a summary of the reports for that year indicating the asphaltene content (% by weight).

f. VANADIUM CONTENT LIMITS:

(i) To assure compliance with Rule 403 of the RCAP, the permittee shall not burn or allow the use of any fuel, in any fuel burning equipment, with a vanadium content which exceeds 150 ppmw.

(ii) The permittee, a service contractor retained by the permittee, or any other qualified agency shall sample the fuel and/or verify vanadium content from supplier's invoice upon every delivery for transfer to the facility's storage tanks. The fuel sampling shall include but not be limited to determining the vanadium content (ppmw), using method ASTM D1548, ASTM D5708, and/or ASTM D5863 (Test Method A) for compliance purposes.

(iii) Prior to combustion, the permittee shall analyze the composition of any fuel blended after the receipt of shipment (including but not limited to blending due to additions to reserve tanks or mixing of fuel from various plant locations). The fuel sampling shall include but not be limited to determining the vanadium content (ppmw).

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(iv) For Units AG1 and AG2, PREPA Aguirre shall submit a quarterly report indicating on a daily basis the vanadium content (ppmw) in the fuels burned or combusted and the amount of fuel burned at each unit. This report shall be submitted to EQB to the attention of the Chief of the Validation and Data Management Division of the Air Quality Area. All quarterly reports shall be postmarked on or before the thirtieth (30th) day following the end of each calendar quarter.

(v) In accordance with Rule 603(a)(4)(i) of the RCAP, the permittee shall retain monitoring records that include:

- 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.

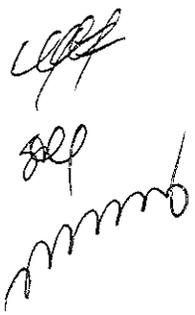
(vi) In accordance with Rule 603(a)(4)(ii) of the RCAP, the permittee shall keep all records of all required monitoring data and supporting information for a period of five (5) years from the date of the monitoring sample, measurement, report, or application. This includes records of the vanadium content (ppmw) of received fuel shipments and the vanadium content (ppmw) of consumed fuels.

(vii) The permittee shall submit, with each annual compliance certification, a summary of the reports for that year indicating the vanadium content (ppmw).

g. WATER WASHING DURING ENVIRONMENTAL OUTAGE:

(i) To assure compliance with Rule 403 of the RCAP, the permittee shall water wash Units AG1 and AG2 no less than one (1) time every eighteen (18) months. Upon agreement of PREPA, the EQB and the U.S. EPA, this permit requirement may be administratively revised to include water washing of Units AG1 and/or AG2 no less than one (1) time every twenty-four (24) months. The environmental outage will include cleaning and maintenance of the gas-side of the boiler including combustion sensitive equipment such as burners and fuel oil handling equipment that can affect compliance with Rules 403 or 404 of the PRCAP and can be more readily inspected during a planned outage than during operation of the boiler.

(ii) In accordance with Rule 603(a)(4)(i) of the RCAP, the permittee shall retain monitoring records that include:

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

(iii) In accordance with Rule 603(a)(4)(ii) of the RCAP, the permittee shall keep all records of 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. This includes a record of water washes which contains the dates and times of washes, as well as information about any corrective measures taken.

h. TRAINING REQUIREMENTS:

(i) PREPA Aguirre shall ensure that PREPA employees in charge of the emission units AG1 and AG2 are properly trained in all operations of the emissions units and shall document the training provided.

i. NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS: COAL- AND OIL-FIRED ELECTRIC UTILITY STEAM GENERATING UNITS CONTAINED IN 40 CFR PART 63 SUBPART UUUUU

(i) The two boilers (AG1 and AG2) are affected by the applicable requirements of the National Emission Standards for Hazardous Air Pollutants: Coal-and Oil-Fired Electric Utility Steam Generating Units contained in 40 CFR part 63 Subpart UUUUU, known as the Mercury and Air Toxics Control Standards (MATS). The affected units must demonstrate compliance with these regulations and requirements outlined in the conditions under this subsection, on or before **April 16, 2016**.

- (ii) In accordance with Section 63.9991 (a)(1) of 40 CFR , the permittee shall comply with each emission limit and each applicable standard of practice work as specified in Table 2, paragraph 5 and Table 3, paragraphs 1, 3, and 4 of 40 CFR part 63 Subpart UUUUU for AG1 and AG2 units. The permittee shall comply with the following applicable emission limits for existing boilers AG1 and AG2:
- a. Filterable particulate matter (PM): 0.030 lb / MMBtu or 0.30 lb / MWh¹⁰
 - b. Hydrochloric acid (HCl): 0.00020 lb / MMBtu or 0.0020 lb / MWh
 - c. Hydrofluoric acid (HF): 0.000060 lb / MMBtu or 0.00050 lb / MWh
 - d. In accordance with Section 63.10000(c)(2)(iv) if any of the units is designated in the subcategory of limited use (limited-use liquid oil-fired subcategory) as defined in Section 63.10042 of 40 CFR, the unit will not be subject to the emission limits set out in subsections i.(ii)(a) to (c) of this section V(A) from Table 2 of the UUUUU Subpart of Part 63 of 40 CFR, but shall meet the requirements for work practices of tune-ups in Table 3, paragraphs 1, 3, and 4 of 40 CFR part 63 Subpart UUUUU.
- (iii) The permittee shall comply with each applicable operating limit as specified in Table 4 of this subpart. [Section 63.9991 (a) (2) of 40 CFR]
- (iv) The permittee shall meet applicable general requirements as described in section 40 CFR 63.10000.
- (v) The permittee shall comply with the applicable initial compliance requirements as specified in section 40 CFR 63.10005.
- (vi) The permittee shall comply with the requirements of initial compliance with the emission limits and work practice applicable as specified in section 40 CFR 63.10011.
- (vii) Continuous compliance shall be demonstrated as applicable and as specified in the sections 63.10006, 63.10007, 63.10009, 63.10010, 63.10020, 63.10021, 63.10022 and 63.10023 of 40 CFR.
- (viii) The permittee shall comply with the applicable notices and reports as specified in sections 63.10030, 63.10031, 63.10032, and 63.10033 of 40 CFR.
- (ix) The permittee shall comply with the applicable general provisions of sections 63.1 through section 63.15, which are included in Table 9 of 40 CFR Subpart UUUUU. [40 CFR Section 63.10040]

¹⁰ Gross electric output.

(x) If the Puerto Rico Electric Energy Authority requests an Order under Section 113 (a) of the Clean Air Act to the Federal Environmental Protection Agency to extend to a fifth year the compliance date for 40 CFR Part 63 Subpart UUUUU, and if it is granted, the permittee must submit a revision to the Title V Operating Permit to incorporate the conditions of the Administrative Order approving the Extension of Compliance in a term not exceeding 30 days from the issuance of the Administrative Order. The deadline to request EPA an Administrative Order for the Compliance Extension of MATS date, is not later than 180 days¹¹ from the compliance date of MATS. The permittee must comply with all procedures and information requirements set out in the EPA's Memorandum¹² of Office of Enforcement and Compliance Assurance (OEACA Policy Memorandum) of December 16, 2011.

(xi) **Conditions for the Extension of Compliance Date [Resolution R-14-10]:** This determination is authorized under section 112(i)(3) of the Clean Air Act and section 63.6(i)(9) of 40 CFR. If the Puerto Rico Electric Power Authority does not meet any of the terms and conditions, or if activities are not performed to achieve compliance, this could result in termination of the extension of compliance, in part or in its entirety, in accordance with the procedures and requirements set forth in section 63.6(i)(14) of 40 CFR.

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- a. This extension of the compliance date of MATS is allowed to install the equipment necessary to make the burning of natural gas as the primary fuel for boilers in AG1 and AG2 in PREPA Aguirre facility. The secondary fuel will be Bunker C.
- b. The Environmental Quality Board granted the extension of the compliance date with MATS up to one year, so the compliance date will expire on April 16, 2016.
- c. PREPA proposed the following compliance schedule:

Emission Unit	Date for which it is planned to start construction or change in process	Date for which the construction or change in process will be completed	Date for which the construction or change in process will be completed
AG1	October 2014	March 2015 ¹	April 16, 2016
AG2	May 2015	October 2015	April 16, 2016

¹PREPA anticipated that the construction of the natural gas terminal known as Offshore GasPort Aguirre (AOGP) will commence in October 2014 and will end in October 2015.

- d. If PREPA cannot meet the activity (this is, start of construction, completing construction, construction AOGP, etc.) to the date proposed in the itinerary, PREPA shall submit a Deviation Report that explains in detail, the reasons why the activity which has not been achieved by the proposed date and a revised schedule for achieving compliance with the

¹¹ That is, on or before October 18, 2014 [Resolution R-14-10].

¹² The Environmental Protection Agency's Enforcement Response Policy for Use of Clean Air Act Section 113(a) Administrative Orders In Relation To Electric Reliability and The Mercury and Air Toxics Standard.

extended date of April 16, 2016. The Board cannot extend beyond April 16, 2016, the date of compliance with MATS. Deviation Reports must be submitted to the Board no later than 15 days after the unfulfilled date.

- e. PREPA shall maintain a record of all the specific activities that are related to the proposed dates for review of the technical staff of the Board.
- f. All reports and notifications shall be sent to the attention of the Manager, Air Quality Area, P.O. Box 11488, San Juan, P.R. 00910.
- g. This approval of the extension of compliance with the MATS does not imply approval of a construction permit, or exempt PREPA to obtain applicable permits for activities and emission sources covered by this approval of the extension of compliance with the MATS. It is PREPA's responsibility of ensuring compliance with obtaining all necessary permits to perform the actions and activities necessary to achieve compliance with the approved extended date.
- h. After selecting the suppliers or contractors, drawings and manufacturers specifications shall be submitted to the Board as part of the construction permit application. If there is any confidential information, it must be processed in accordance with the procedures of confidential information for determination of the Governing Board of the Environmental Quality Board.
- i. Your request for extension filed on January 17, 2014 and the information submitted dated February 28, 2014 are part of this authorization (See Attachment C).

k. ADDITIONAL MONITORING REQUIREMENTS FOR AG1 AND AG2

(A) The following monitoring requirements apply to units AG1 and AG2 (hereinafter generating unit).

1. Optimization

- a. PREPA Aguirre shall establish and maintain optimal operating ranges that assure compliance with Rule 403 of the RCAP. PREPA Aguirre shall review and revise such ranges as necessary depending on operating conditions of the boiler. The optimal operating ranges shall be established at fixed loads (50%, 75% and 100% maximum continuous rating), frequency control and sootblowing modes for the following parameters:
 - (1) minimum and maximum percent oxygen levels;
 - (2) average cold end air heater temperature, minimum degrees Fahrenheit;

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- (3) atomizing steam-to-oil pressure differential, minimum psid¹³;
- (4) sootblower header steam pressure, minimum psig¹⁴ (during sootblowing only); and
- (5) fuel viscosity at burner header, maximum SSU¹⁵.

b. The permittee shall maintain the established optimal operating ranges and shall not operate any generating unit outside of the optimal operating ranges established for any parameter set forth above in paragraph 1.a. The requirements of this paragraph shall not apply during the following periods:

- (1) start up or shutdown (loads below 50%) periods for which operating ranges do not apply; or
- (2) malfunction¹⁶ periods; or
- (3) during any period, as necessary but not to exceed fifteen (15) minutes, in which PREPA Aguirre is taking a burner elevation in or out of service in conformance with best practices.

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c. Within twenty four (24) hours from the onset of the malfunction period, the permittee shall assess whether operation of an affected generating unit within the previously established optimal operating ranges is appropriate for the period of malfunction. If PREPA Aguirre determines that operation within the previously established optimal operating ranges is inappropriate, no later than 120 hours from the onset of the malfunction period, PREPA Aguirre shall modify the previously established optimal operating ranges and maintain any optimal operating range modified for the duration of the period of malfunction.

2. Continuous Monitoring

a. PREPA Aguirre shall install, repair, replace, calibrate and test, in accordance with the table provided below and/or manufacturer's recommendations, the following monitors:

- (1) continuous oxygen;
- (2) average cold end air heater temperatures;

¹³ Psid, pound per square inch, differential

¹⁴ Psig, pound per square inch, gauge

¹⁵ SSU, Saybolt Universal Seconds

¹⁶Malfunction shall mean any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

- (3) differential pressure across air heaters;
- (4) atomizing steam/fuel oil differential pressure at burner header;
- (5) sootblower steam pressure at header;
- (6) fuel viscosity;
- (7) furnace pressure;
- (8) fuel flow rates;
- (9) gross power in kilowatts;
- (10) feedwater temperature economizer inlet; and
- (11) opacity monitors (after installation as addressed in paragraph 3).

b. PREPA Aguirre shall measure, average, record, calibrate and conduct quality assurance testing for the monitors required above in accordance with the table below. Such activities shall be conducted in a manner consistent with recognized electrical generating industry practices and standards that include manufacturer's recommendations and standard engineering procedures.

Continuous Monitoring Requirements				
Monitor	Measurement Frequency	Averaging Frequency	Recording Frequency	Quality Assurance
Oxygen	Continuously or no less frequently than every 15 sec	6 minutes	12-minute average	As per 40 CFR Part 60 Appendix F
Opacity	Continuously or no less frequently than every 10 sec	6 minutes	6-minute average and 10 sec	As per 40 CFR Part 51 Appendix M, Method 203
Average Cold End Air Heater Temperatures	Continuously	None	Hourly	Yearly as per OPM ¹⁷
Differential Pressure Across Air Heaters	Continuously	None	Hourly	Yearly as per OPM
Atomizing Steam/Fuel oil Differential Pressure at Burner Header	Continuously	None	Hourly	Yearly as per OPM
Sootblower Steam Pressure	Continuously by Electronics	None	None	Yearly as per OPM
Fuel viscosity	Continuously	None	Hourly	Yearly as per OPM
Furnace Pressure	Continuously	None	Hourly	Yearly as per OPM

¹⁷ OPM is an abbreviation for Operations and Preventive Maintenance that is required by paragraph 6 of this part.

Continuous Monitoring Requirements				
Monitor	Measurement Frequency	Averaging Frequency	Recording Frequency	Quality Assurance
Fuel Flow Rate	Continuously	None	Continuously	Yearly as per OPM
Gross Power	Continuously	None	Continuously	Yearly as per OPM
Feedwater Temperature at Economizer Inlet	Continuously	None	Hourly	Yearly as per OPM

- c. PREPA Aguirre shall calibrate, operate, performance test and conduct quality assurance procedures for each oxygen monitor in accordance with 40 CFR Part 60 Appendix F.
- d. Within sixty (60) days after installation in accordance with paragraph 3 of Section V.A.2.(A), PREPA Aguirre shall performance test each opacity monitor in accordance with 40 CFR Part 60 Appendix B, Performance Specification 1. Upon completion of the performance test, PREPA Aguirre shall calibrate and operate each opacity monitor in accordance with 40 CFR Part 51 Appendix M, Method 203.
- e. In addition, following performance testing and calibration, conducted pursuant to paragraph 2.d above, PREPA Aguirre shall perform ongoing quality assurance assessments for each opacity monitor, in accordance with 40 CFR Part 51 Appendix M, Method 203.
- f. For the monitors required above by paragraph 2.a (2) through 2.a (11), PREPA Aguirre shall periodically ensure that zero or span drifts do not exceed 3% of the upper end of the optimal operating range.
- g. PREPA Aguirre shall:
 - (1) for the data generated by the monitors identified in paragraph 2.a. above, observe the monitoring data generated in order to ensure that the optimal operating ranges are maintained to assure compliance with the opacity limit;
 - (2) calculate, on a monthly basis, the heat rate of each generating unit (Btu/kilowatt hour);
 - (3) while sootblowing, compare the sootblowing steam pressure data with the optimal operating range for sootblowing; and
 - (4) at a minimum, install alarms in the control rooms for monitors listed above in subparagraphs 2.a.(1), (4) and (7), and install, in the control rooms, alarms for opacity monitors in accordance with paragraph 3 of this Part. These alarms shall alert an operator when a generating unit is operating outside any optimal operating range established. With respect to the monitor listed above in paragraph 2.a (10), PREPA Aguirre shall ensure that each generating unit is equipped, at a minimum, with an alarm that shall notify an operator when the feed water temperature at the economizer inlet is below the optimal temperature range.

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3. Opacity Monitor Installation

- a. PREPA Aguirre shall install **new** opacity monitors at the stacks of each generating unit and operating unit and operate and conduct performance tests and calibration of such monitors in accordance with paragraphs 2 and 6 of this Part in order to ensure long-term operation of each generating unit in compliance with Rule 403 of the RCAP.
- b. Upon completion of installation of an opacity monitor, PREPA Aguirre shall install, in the control room for such monitor, an alarm for such monitor.

4. Fuel Quality

- a. The permittee shall sample and analyze the following fuel parameters in accordance with the method of analysis set forth below. All other sampling and analysis required shall be conducted in accordance with appropriate ASTM or IP Methods.

- (1) asphaltenes: IP 143 or ASTM 3279;
- (2) sulfur: ASTM D4294;
- (3) vanadium: ASTM D1548; and
- (4) viscosity: ASTM D445 or ASTM D88.

- b. Prior to receipt of any shipment of fuel, PREPA Aguirre shall receive from the fuel supplier a certified laboratory analysis of the fuel to be delivered for the following parameters:

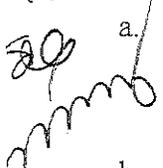
- (1) gross heat content, Btu/lb;
- (2) API gravity;
- (3) viscosity (Saybolt @122°F);
- (4) asphaltenes, ppmw;
- (5) sulfur, wt %;
- (6) vanadium, ppmw;
- (7) sodium plus potassium, ppmw;
- (8) calcium, ppmw;
- (9) ash, wt % (% by weight);

(10) filterable solids and water, wt % (% by weight); and

(11) pour point, °F.

- c. Prior to combustion, PREPA Aguirre shall sample and analyze the composition of any fuel blended after receipt of shipment (including, but not limited to blending due to additions to reserve tanks or mixing of fuel from various Power Plant locations) for asphaltenes, sulfur, vanadium and viscosity, in accordance with paragraph 4.a above.
- d. Any analysis conducted in accordance with paragraph 4.c. above shall be certified by both a laboratory supervisor and the chemist who performed such analysis (certification may be made by one person where the laboratory supervisor is also the chemist who performed such analysis).
- e. PREPA Aguirre shall provide taps for sampling prior to each oil heater at each generating unit.

 5. **Spare Parts Inventory**

-  a. PREPA Aguirre shall maintain a spare parts inventory of spare hardware components for each generating unit to ensure that repairs and replacement of any hardware component is performed with as little interruption to the operation of the generating unit as possible.
- b. PREPA Aguirre shall document the hardware purchasing and replenishment of the inventory.

6. **Operations and Preventive Maintenance**

- a. Proper operations and preventive maintenance shall include, at a minimum, the following elements:
- (1) operation checklists and preventive maintenance checklists for each generating unit with schedules for inspection;
 - (2) operations activities and preventive maintenance activities relating to hardware components that affect or potentially affect compliance with Rule 403 of the RCAP, including but not limited to all monitors required above in paragraph 2;
 - (3) visible emission readings; and
 - (4) operations manuals for the PREPA Aguirre facility.
- b. PREPA Aguirre shall perform the operations and preventive maintenance activities listed below in order to ensure that each generating unit achieves and maintains compliance with Rule 403 of the RCAP:

- (1) operate each generating unit within the optimal operating ranges established; PREPA Aguirre shall not be required to operate each generating unit within the optimal operating ranges established during start up, shutdown (loads below 50%), or malfunction periods or during any period, as necessary but not to exceed fifteen (15) minutes, in which PREPA Aguirre is taking a burner elevation in or out of service in conformance with best practices;
 - (2) respond and document operator response to data and analysis generated pursuant to the continuous monitoring referenced in paragraph 2,
 - (3) implement inspections pursuant to the checklists in order to determine if each generating unit is functioning properly;
 - (4) monitor and record the frequency of water-washing each boiler (furnace and back passage surfaces);
 - (5) monitor and record the frequency of steam cleaning the tubes of each generating unit;
 - (6) monitor and record the frequency of cleaning the burner tips and guns;
 - (7) determine deficiencies, including inspection of alarms and, where necessary, repair of alarms within two working days; and
 - (8) document any deficiencies discovered, analyze and document the reasons for the deficiencies, and document the steps taken to correct any deficiencies.
- c. In addition to monitor the emissions with the COMS, PREPA Aguirre shall conduct visible emissions testing once every two weeks in accordance with the requirements listed below:
- (1) visible emission readings shall be conducted by certified visible emission readers in accordance with Test Method 9, 40 CFR Part 60 Appendix A (Method 9), for minimum of six minutes;
 - (2) all visible emission readings recorded shall be recorded in accordance with Method 9; and
 - (3) where a PREPA visible emission reader records, in accordance with Method 9, an average opacity level greater than 20% opacity for a period equal to or greater than six (6) minutes, PREPA Aguirre shall review the operating conditions of the relevant generating unit to determine and document the cause of any emissions with such elevated opacity, correct any deficiency and document the steps taken to correct any deficiency.
- d. PREPA Aguirre shall ensure that PREPA employees are properly trained in all operations of the emissions units and shall document training provided.

B. Normal operating scenario: CC1-1, CC1-2, CC1-3, CC1-4, CC2-1, CC2-2, CC2-3, CC2-4 (combined cycle turbines), AAGT2-1 and AAGT2-2 (gas turbines)

The following table contains a summary of applicable requirements, as well as the test methods, for emission units CC1-1, CC1-2, CC1-3, CC1-4, CC2-1, CC2-2, CC2-3, CC2-4, AAGT2-1 and AAGT2-2 identified in Section II of this permit. The permit conditions include additional applicable requirements.

Condition	Parameter	Value	Units	Test 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	Semiannually
Visible Emissions Limit	Visible Emissions	20	Percent (6-minute average)	Method 9	Once during the first year of permit approval.	Tests results	Semiannually
				Visible emissions inspections	Every two (2) weeks	Record book	Semiannually
Sulfur emission limit	Sulfur Content	0.5	Percent weight by	Fuel sample	Daily	Sulfur percent records	Monthly
				Fuel supplier analysis	With each receipt	Daily Record of the sulfur content on fuel	
Fuel Consumption Limit	No. 2-Distillate Oil (diesel)	354,482,160	Gallons per year	Consumption	Daily	Record book	Monthly

CC1-1
CC2-1
CC2-2
CC2-3
CC2-4

a. PARTICULATE MATTER EMISSION LIMIT:

- (i) The permittee shall not cause nor permit the emission of particulate matter, in excess of 0.3 lb/MMBtu from emission units CC1-1, CC1-2, CC1-3, CC1-4, CC2-1, CC2-2, CC2-3, CC2-4, AAGT2-1 and AAGT2-2. [Rule 406 of the RCAP]
- (ii) PREPA Aguirre 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 Aguirre 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 reports required in condition 14 of the 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 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% in 6 minutes average for units CC1-1, CC1-2, CC1-3, CC1-4, CC2-1, CC2-2, CC2-3, CC2-4, AGGT2-1 and AGGT2-2. 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 30 minutes interval. [Rule 403(A) of the RCAP]

- (ii) Because it is not viable to install a continuous opacity monitoring system (COMS) in these turbines, as alternate test method, PREPA shall contract an independent opacity reader, certified in a school approved by EPA or EQB, to perform one (1) opacity reading to each stack of each turbine, during the first year of the permit using Method 9 established under 40 CFR part 60, Appendix A. The applicable turbine shall be operating at the time of performance of the opacity readings.

- (iii) PREPA Aguirre shall perform opacity visual inspections every two (2) weeks 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 Aguirre 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 Aguirre 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 Aguirre shall realize tests of visible emissions every two weeks 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 Aguirre 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 two weeks.
- (D) PREPA Aguirre 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 also shall include the total number of the readings of visible emissions realized in that period for the units subject to this requirement. PREPA Aguirre 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 5 years, in compliance with the Rule 603(a)(4)(ii) of the RCAP.

- (iv) PREPA Aguirre shall submit to the Board, a copy of the format to be used to record the readings of visible emissions at least 30 days prior to the reading of the initial opacity reading.
- (v) The permittee shall notify in writing the Board at least 15 days 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 semiannual report required in condition 14 of Section III of 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 units CC1-1, CC1-2, CC1-3, CC1-4, CC2-1, CC2-2, CC2-3, CC2-4, AGGT2-1 and AAGT2-2. [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 Aguirre shall obtain an analysis of sulfur content 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. The fuel sampling shall include but not be limited to determining the fuel's sulfur content (% by weight).
- (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 ten (10) oil- fired combustion turbines. This report shall be submitted to the Board within the first 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 of the Air Quality Area 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 results of fuel sampling, monthly fuel consumption reports and the sulfur content in the fuel burned.

- (v) The permittee must submit a summary with the annual compliance reports, indicating the sulfur content by weight for the fuels consumed monthly.

d. FUEL CONSUMPTION LIMIT:

- (i) The permittee shall not exceed the total consumption limit for No. 2 fuel oil of **354,482,160 gallons** for any period of twelve (12) consecutive months for the units CC1-1, CC1-2, CC1-3, CC1-4, CC2-1, CC2-2, CC2-3, CC2-4, AGGT2-1 and AAGT2-2. The fuel consumption for any consecutive twelve (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 5 years from the date of the monitoring sample, measurement, report or application. These include the 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 the turbines in terms of the monthly and annual consumption.

e. NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR COMBUSTION TURBINES CONTAINED IN 40 CFR PART 63, SUBPART YYYY

- (i) Any existing, new, or reconstructed source that have or operates stationary combustion turbines, is subject to the National Emission Standards for Hazardous Air Pollutants for Combustion Turbines contained in 40 CFR Part 63, Subpart YYYY.
 - a. According to 40 CFR section 63.6090, the existing stationary combustion turbines in all subcategories does not have to comply with the requirements of this Subpart YYYY or 40 CFR Part 63 Subpart A. No initial notification is necessary for any existing internal stationary combustion turbine, even if a new or reconstructed turbine in the same category would require an initial notification.
 - b. If one of the turbines was reconstructed according to the definition of reconstruction in section 63.2. subpart A. and if the reconstruction began or will begin after January 14, 2003, the unit must comply with the applicable requirements of this Subpart YYYY.

C. D1, D2, D3, D4, R5, R6, LDR1 and LDR2 – Diesel Storage and Service Tanks

Condition	Parameter	Value	Units	Test Method	Frequency	Recordkeeping Requirements	Reporting Frequency
Límite de throughput Diesel	D1	78,840,000	Gallons per year	Record	Monthly	Record	Semiannual (See General condition 14)
	D2	78,840,000					
	D3	78,840,000					
	D4	78,840,000					
	LDR1	78,840,000					
	LDR2	78,840,000					
	R5	177,244,000					
	R6	177,244,000					

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a. Throughput limits

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- (i) The maximum permitted storage or service of diesel for each tank will be the maximum throughput established in the table above. [Cumulative Increase]
- (ii) The permittee shall keep a monthly record where the amounts of fuel loaded to each tank are recorded. This record shall be available at all times for inspection.
- (iii) The permittee shall submit semiannually, a summary of the loads to each tank along with the semiannual report required in condition II.14. of this permit.
- (iv) The permittee shall maintain documentation establishing the dimensions of each storage tank and an analysis showing their capacity. This documentation shall be available for review by the technical staff of the Board at all times and kept at the facility while the source is in operation.
- (v) According to Rule 603(A)(4)(ii) of the RCAP, the permittee shall retain records of all required monitoring data and supporting information for a period of 5 years from the date of sampling, measurement, report or application of sampling.

Section VI – Recordkeeping Requirements:

- A. PREPA Aguirre shall have available at all times in the facility a copy of the Emergency Plan required under Rule 107 of the RCAP.

- B. PREPA Aguirre must keep a record of all research or training related firefighting activities.
- C. PREPA Aguirre 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 CFR §82.166]
- D. PREPA Aguirre must keep available documents that establish the dimensions of the storage tanks and an analysis showing their capacity as specified in 40 CFR §60.116b(a). This required record will be kept at the installation while the source is in operation.
- E. 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. All rolling averages shall be calculated on a daily basis.
- F. The levels of the fuel tank, both for fuel oil no. 6 and fuel oil no. 2 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 VII - Reporting Requirements:

- A. Certification of Compliance: In accordance with Rule 602(C)(2)(ix)(c) of the RCAP, PREPA Aguirre shall submit an annual certification of compliance. This certification of compliance shall be submitted to both the EQB and the EPA¹⁸ no later than April 1st of each year, covering the previous year. The certification of compliance must include, but shall not be limited to, the information required in Rule 603(c) of the RCAP.
- B. Calculation of Emissions: On April 1st of each year, PREPA Aguirre shall send the estimate of real or permissible 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, HAP's and CO_{2e} emissions.
- C. In accordance with Rule 603(a)(5)(i) of the RCAP¹⁹, PREPA Aguirre shall submit of reports of any required monitoring every six months, or more frequently if required by the underlying applicable requirement or by the Board. All instances of deviations from permit requirements

¹⁸ The EQB certification must be addressed to: Manager, Air Quality Area, Box 11488, San Juan, P.R. 00910. The EPA certification must be addressed to: Chief, Enforcement and Superfund Branch, CEPD, US EPA Region II, City View Plaza – Suite 7000, #48 Road 165 Km 1.2, Guaynabo, P.R. 00968-8069.

¹⁹ These reports cover two major elements. The first element is the summary of all periodic monitoring / sampling required in this permit. The second element requires that all deviations from permit conditions are clearly identified, summarized and reported to the Board.

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. The report that covers the period from January to June shall be submitted no later than October 1st of the same year, and the report covering the period from July to December shall be submitted no later than April 1st of the next year. Once the guidelines are developed by the Board, the permittee must use them to complete these reports.

- D. Monthly Reports of Fuel Consumption: Units AG1, AG2, CC1-1, CC1-2, CC1-3, CC1-4, CC2-1, CC2-2, CC2-3, CC2-4, AGGT2-1 and AGGT2-2 are affected by Rule 410 of the RCAP, therefore PREPA Aguirre must submit, on a monthly basis, a report indicating sulfur content by percent by weight and daily fuel consumption for each fuel for each unit. The report must be submitted to the Board to the attention of the Chief of the Validation Data and Mathematical Model Division during the first 30 days of the month following the month for which it is representative.
- E. 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.
-  F. In accordance with rule 603 (a)(5)(ii)(b) of the RCAP, PREPA Aguirre 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 Aguirre 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.)

- G. PREPA Aguirre 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]
- H. PREPA Aguirre 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.
- I. PREPA Aguirre must comply with the applicable notification requirements of 40 CFR §63.6645 and 40 CFR part 63, subpart A by the dates specified.

Section VIII - Insignificant Emission Units

PREPA Aguirre provided the following list of insignificant activities below in order to permit a better understanding of its operations and equipment distribution. Given that it is not required to keep this list up-to-date, the activities may have suffered changes from the time when it was submitted, however, PREPA Aguirre must include the list of insignificant activities that are exempt due to size or production and some of these may require a construction permit under Rule 203 of the RCAP.

Emission Unit ID	Description (Exemption criteria)
Used oil, lubricating oil, hydrazide, aqueous ammonia and ciclohexilamine tanks	Less than 10,000 gallons [Appendix B(3)(ii)(N) of the RCAP].
Acid and caustic soda tanks	Less than 10,000 gallons [Appendix B(3)(ii)(N) of the RCAP]
Liquid propane tanks	Less than 10,000 gallons [Appendix B(3)(ii)(N) of the RCAP].
Starting engines fuel tanks	Less than 10,000 gallons [Appendix B(3)(ii)(N) of the RCAP]
Three reserve tanks (R1, R2 and R3) of fuel oil no.6	Less than 1 ton/yr VOC (each) [Appendix B (3)(ii)(P) of the RCAP].
Two service tanks (S1 and S2) of fuel oil no. 6	Less than 1 ton/yr VOC (each) [Appendix B (3)(ii)(P) of the RCAP].
Two service tanks (TG1 or LDS1 and TG2 o LDS2) of fuel oil no. 2	Less than 10,000 gallons [Appendix B(3)(ii)(N) of the RCAP].
Fuel oil no.6 and fuel oil no. 2 discharge docks	Less than 1 ton/yr VOC (each) [Appendix B (3)(ii)(P) of the RCAP].

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Section IX - Permit Shield

1- Pursuant to Rule 603(d) of the RCAP, compliance with the conditions of the permit shall be deemed compliance with any applicable requirement at the date the permit is issued, whenever said requirement is specifically identified in the permit. Likewise, it will be considered to be in compliance with any requirement specifically identified as Not Applicable in the permit.

A. Non- applicable requirements

Determination of Non-Applicability	
Code	Reason
New Source Performance Standards for Stationary Gas Turbines (40 CFR Part 60, Subpart GG)	The turbines were built before October 3, 1977. The Subpart GG of 40 CFR Part 60 is not applicable to sources constructed before October 3, 1977.
New Source Performance Standards for fossil-fuel-fired steam generators (40 CFR Part 60, Subpart D)	The AG1 and AG2 boilers were constructed before August 17, 1971. Subpart D of 40 CFR Part 60 does not apply to boilers constructed before August 17, 1971.
National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process heaters (40 CFR Part 63, Subpart DDDDD)	Not applicable to boilers AG1 and AG2 that are steam generating units of electric utilities covered under Subpart UUUUU of Part 63 of 40 CFR (Section 63.7491 (a) of 40 CFR).
National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial and Institutional Boilers (40 CFR Part 63, Subpart JJJJJ)	Not applicable to boilers AG1 and AG2 located at major sources of hazardous air pollutants, neither to boilers that are steam generating units for electric utilities covered under Subpart UUUUU of Part 63 of 40 CFR (Section 63.1195 (k) of 40 CFR).
Rule 106 (A), (B) and (C) of the RCAP only for the Method 9 required in this permit.	It does not apply because the Method 9 already it is established for these units.

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Section X - 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, and after verifying the administrative record and 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 subject to the terms and conditions stipulated therein.

In San Juan, Puerto Rico, today April 14, 2015.

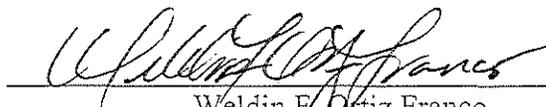
ENVIRONMENTAL QUALITY BOARD



Suzette M. Meléndez Colón
Vice President



Rebeca Acosta Pérez
Associate Member



Weldin F. Ortiz Franco
President

UET
SEP
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APPENDIX

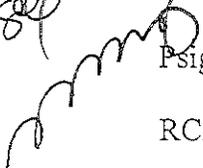
Appendix A - Definitions and Abbreviations

A. Definitions:

1. Act – US Clean Air Act, as amended, 42 U.S. 7401, et seq.
2. Responsible Official – See definition for Responsible Official as established in the Environmental Quality Board Regulations for the Control of Atmospheric Pollution (1995).
3. Regulations - Environmental Quality Board Regulations for the Control of Atmospheric Pollution.
4. Title V - Title V of the US Clean Air Act (42 U.S.C. 7661).

B. Abbreviations

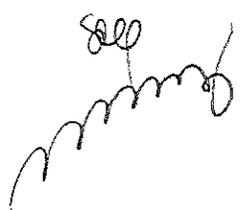
API	American Standard Testing Methods [sic]
AP-42	Compilation of Air Pollutant Emission Factors
ASTM	American Standard Testing Methods
Bbl	barrels
Btu	British Thermal Unit
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO ₂ e	Carbon dioxide equivalent
EPA	US Environmental Protection Agency
GHG	Greenhouse Gases
Hp	horsepower
HAP	Hazardous Air Pollutants
EQB	Puerto Rico Environmental Quality Board
Lbs	Pounds
MMBtu	Million Btu

NAAQS	National Ambient Air Quality Standards
NO _x	Nitrogen Oxide
OPM	Operations and Preventive Maintenance
Pb	Lead
PM	Particulate Matter
PM ₁₀	Particulate matter with a mass median aerodynamic diameter equal to or less than 10 microns.
PREPA	Puerto Rico Electric Power Authority
 Ppmw	parts per million by weight
 P _s id	pounds per square inch, differential
 P _s ig	pounds per square inch, gauge
RCAP	Environmental Quality Board Regulations for the Control of Atmospheric Pollution
RMP	Risk Management Plan
SIC	Standard Industrial Classification
SO _x	Sulfur Oxides
SO ₂	Sulfur Dioxide
SSU	Second Saybolt Universal
VOC	Volatile Organic Compounds

Appendix B - List of Hazardous Air Pollutans

Hazardous Air Pollutants	Emissions (ton/year)
1,1,1-Trichloroethane	5.76E-02
Acenaphthene	5.15E-03
Acenaphthylene	6.18E-05
Anthracene	2.98E-04
Benzo(a)anthracene	9.79E-04
Benceno	1.367E+00
Benzo(b,k)fluoranthene	3.61E-04
Benzo(g,h,i)perylene	5.52E-04
Chrysene	5.81E-04
Dibenzo(a,h)anthracene	4.08E-04
Ethylbenzene	1.55E-02
Fluoranthene	1.18E-03
Fluorene	1.09E-03
Formaldehído	14.75+00
Naphthalene	1.107+00
Phenanthrene	2.56E-03
Pyrene	1.04E-03
Toluene	1.51E+00
Xylene	2.66E-02
Antimony	1.28E+00
Arsenic	5.83E-01
Beryllium	1.74E-02
Cadmium	2.147E-01
Chromium	4.71E-01
Chromium VI	6.00E-02
Cobalt	1.47E+00
Copper	4.30E-01
Fluoride	9.11E+00
Lead	3.72E-01
Manganese	19.62E+00
Mercury	5.867E-02
Nickel	2.071E+01
Phosphorous	2.31E+00
Selenium	6.15E-01
Vanadium	7.76E+00
Zinc	7.10E+00
Barium	6.30E-01
Chloride	84.71E+00
Molybdenium	1.90E-02
1,3-Butadiene	3.8289E-01
PAH	9.5747E-01
Total	177.73

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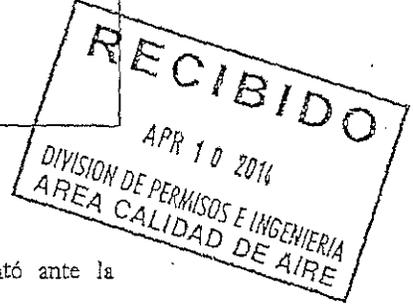
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Appendix C – Documents of the MATS Compliance Extension Request Documents

ESTADO LIBRE ASOCIADO DE PUERTO RICO
OFICINA DEL GOBERNADOR
JUNTA DE CALIDAD AMBIENTAL

IN RE:	REF. NÚM.: R-14-10
AUTORIDAD DE ENERGÍA ELECTRICA AGUIRRE STEAM POWER PLANT (PETICIONARIO)	SOBRE: SOLICITUD DE EXTENSIÓN DE FECHA PARA CUMPLIMIENTO INICIAL MATS



RESOLUCIÓN Y NOTIFICACIÓN

En referéndum celebrado el 28 de marzo de 2014, se presentó ante la consideración de la Junta de Gobierno (en adelante, la "Junta de Gobierno") de la Junta de Calidad Ambiental (en adelante, la "JCA") la Solicitud de Extensión de Fecha para el Cumplimiento Inicial de los Estándares Nacionales de Emisión de Contaminantes Atmosféricos Peligrosos: *Coal and Oil Fired Electric Utility Steam Generating Units* contenidos en la Subparte UUUUU de la Parte 63 del 40 CFR, mejor conocida como *Mercury and Air Toxics Standards* (en adelante, "MATS") para la Autoridad de Energía Eléctrica (en adelante, "AEEPR", o *Puerto Rico Electric Power Authority*, en adelante "PREPA", por sus siglas en inglés) en sus calderas AG1 y AG2 de la Estación Generatriz de Aguirre que ubica en el Barrio Aguirre del municipio de Salinas (en adelante "PREPA Aguirre").

El 16 de diciembre de 2011, la Agencia Federal de Protección Ambiental (en adelante, "EPA" por sus siglas en inglés) promulgó los MATS con el fin de reducir las emisiones de metales pesados tales como el mercurio, arsénico, cromo, níquel; gases ácidos como ácido clorhídrico y ácido fluorhídrico provenientes de las unidades de generación de energía eléctrica que utilizan carbón o combustible líquido. Las fuentes afectadas son las unidades de generación de energía mediante vapor (*electric utility steam generating unit* o EGU, en inglés), que utilizan carbón o combustible fósil líquido y tienen capacidad de generación mayor de 25 megavatios de electricidad ("MWe", por sus siglas en inglés) que sirven un generador que produce electricidad para la venta.

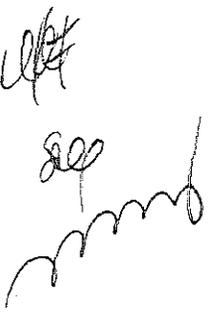
La fecha límite establecida por la EPA para que las unidades existentes estén en cumplimiento con los MATS vence el 16 abril de 2015. A tenor con lo dispuesto en la Sección 112(i)(3)(B) de la Ley Federal de Aire Limpio, la AEEPR puede solicitar una extensión de un año para la instalación y/o construcción de sistemas de control de

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contaminantes atmosféricos necesarios para demostrar cumplimiento con los límites de emisión.¹

Según dispone la sección 63.6(i) del 40 CFR, la solicitud para una extensión a la fecha de cumplimiento debe incluir lo siguiente:

- A) Una descripción de los controles que serán instalados para cumplir con los estándares; y
- B) Un itinerario de cumplimiento, incluyendo la fecha para la cual se alcanzará cumplimiento para cada paso. Como mínimo, la lista de fechas deberá incluir:
 - a. La fecha en que se iniciará la construcción, la instalación de equipos de control o el cambio en el proceso;
 - b. la fecha en que se logrará el cumplimiento total;
 - c. la fecha en la que culminarán las actividades de construcción, instalación de equipo de control de emisiones o el cambio en los procesos; y
 - d. la fecha en que se logrará el cumplimiento total.


El 17 de enero de 2014, la AEEPR sometió a la Junta de Gobierno de la JCA una Solicitud de Extensión Inicial a la Fecha de Cumplimiento con el MATS para la instalación de PREPA Aguirre (AEEPR Aguirre Power Station). El asunto fue referido al Área de Calidad de Aire (en adelante, "ACA"), quienes evaluaron el documento, encontrando que la información sometida era general y carecía de detalles necesarios para evaluar la misma adecuadamente. En atención a esto, el 5 de febrero de 2014, el ACA solicitó información adicional para evaluar adecuadamente la solicitud de extensión. Así las cosas, el 28 de febrero de 2014, AEEPR sometió un documento suplementando su solicitud original, por lo que luego de evaluar el mismo, el ACA entendió que cumplía con los requisitos mínimos dispuestos en la sección 63.6(1) del 40 CFR. En atención a esto, la Junta de Gobierno de la JCA procede a resolver.

I. RESOLUCIÓN:

Luego de evaluar la totalidad del expediente administrativo, discutir todos los méritos de este caso, y en virtud de los poderes y facultades conferidos por la Ley Núm. 416-2004, según enmendada, conocida como la "*Ley sobre Política Pública Ambiental*" y los reglamentos aprobados a su amparo, la Junta de Gobierno RESUELVE:

¹ The Administrator (or a State with a program approved under subchapter V of this chapter) may issue a permit that grants an extension permitting an existing source up to 1 additional year to comply with standards under subsection (d) of this section if such additional period is necessary for the installation of controls. An additional extension of up to 3 years may be added for mining waste operations, if the 4-year compliance time is insufficient to dry and cover mining waste in order to reduce emissions of any pollutant listed under subsection (b) of this section.

1. Basado en la información provista por la Autoridad de Energía Eléctrica de Puerto Rico se declara HA LUGAR la petición de extensión de la fecha de cumplimiento con el MATS para la unidades AG1 y AG2 de la instalación PREPA Aguirre (AEEPR Aguirre Power Station), sujeto a los términos y condiciones enumerados a continuación:

- a. Esta determinación es autorizada bajo la sección 112(i)(3) de la Ley de Aire Limpio y la sección 63.6(i)(9) del 40 CFR. Si la Autoridad de Energía Eléctrica de Puerto Rico no cumple alguno de los términos y condiciones, o si no se realizan las actividades para lograr cumplimiento, esto podría resultar en la terminación de la extensión de cumplimiento, en parte o en su totalidad, de acuerdo con los procedimientos y requisitos establecidos en la sección 63.6(i)(14) del 40 CFR.
- b. Esta extensión de la fecha de cumplimiento de MATS es permitida para instalar el equipo necesario para establecer la quema de gas natural como combustible primario para las calderas AG1 y AG2 en la instalación de PREPA Aguirre. El combustible secundario será Bunker C.
- c. La Junta de Calidad Ambiental concede la extensión de la fecha de cumplimiento con el MATS hasta un máximo de 1 año, por lo que la fecha de cumplimiento expirará el 16 de abril de 2016.
- d. La AEEPR propuso el siguiente itinerario de cumplimiento:

Unidad de Emisión	Fecha para la cual se planifica iniciar la construcción o el cambio en proceso	Fecha para la cual la construcción o el cambio en proceso será completado	Fecha en que se logrará el cumplimiento definitivo
AG1	Octubre 2014	Marzo 2015 ¹	16 de abril de 2016
AG2	Mayo 2015	Octubre 2015	16 de abril de 2016

¹AEEPR anticipa que la construcción del terminal de gas natural conocido como *Aguirre Offshore GasPort* (AOGP) comenzará en octubre de 2014 y terminará en octubre de 2015.

- e. Si no logra cumplir la actividad (entiéndase, inicio de construcción, completar la construcción, construcción del AOGP, etc.) para la fecha propuesta en el itinerario, la AEEPR deberá someter un *Informe de Desviación* donde explique en detalle las razones por las cuales la actividad no ha sido lograda para la fecha propuesta y un itinerario revisado para lograr el cumplimiento con la fecha extendida del 16 de abril de 2016. La JCA no podrá extender más allá del 16 de abril de 2016 la fecha de cumplimiento con MATS. Los Informes de Desviación deberán someterse a la Junta no más tarde de 15 días posteriores a la fecha no cumplida.

- f. La AEEPR deberá mantener un registro de todas las actividades específicas realizadas y que estén relacionadas con las fechas propuestas para revisión del personal técnico de la Junta.
- g. Todos los informes y notificaciones deberán enviarse a la atención del Sr. Eliud Gerena López, Gerente Interino del Área de Calidad Aire al P.O. Box 11488, San Juan, P.R. 00910.
- h. Esta aprobación de la extensión de cumplimiento con el MATS no implica una aprobación de permiso de construcción, ni exige a la AEEPR de obtener los permisos aplicables para las actividades y fuentes de emisión cubiertas en esta aprobación de la extensión de cumplimiento con el MATS. Es responsabilidad de la AEEPR asegurar el cumplimiento con la obtención de todos los permisos necesarios para realizar las acciones o actividades necesarias para lograr cumplimiento para la fecha extendida aprobada.
- i. La Autoridad de Energía Eléctrica de Puerto Rico, deberá someter una revisión a su permiso de operación Título V para incorporar las condiciones de esta aprobación de la Extensión de Cumplimiento.
- j. Si la Autoridad de Energía Eléctrica de Puerto Rico desca someter una extensión de cumplimiento más allá del 16 de abril de 2016, deberá someter dicha petición al Administrador de la EPA, o quien él designe.
- k. La EPA ha establecido mediante memorando fechado el 16 de diciembre de 2011, que la fecha límite para solicitar a la EPA la Orden Administrativa para la Extensión de Cumplimiento para MATS es no más tarde de 180 días de la fecha de cumplimiento de MATS o sea en o antes del 18 de octubre de 2014.
- l. Si la AEEPR solicita a la EPA una Orden Administrativa bajo la Sección 113(a) de la Ley de Aire Limpio para extender a un quinto año la fecha de cumplimiento para la Subparte UUUUU de la Parte 63 del 40 CFR y si la misma es concedida, deberá someter una revisión a su permiso de operación Título V para incorporar las condiciones de la Orden Administrativa aprobando la Extensión de Cumplimiento.
- m. Una vez seleccionados los suplidores o contratistas, los diagramas y especificaciones del manufacturero deberán ser entregados a la Junta para que forme parte de la solicitud de permiso de construcción. De haber alguna información confidencial, deberá tramitar la misma de acuerdo con

los procedimientos de información confidencial para determinación de la Junta de Gobierno de la Junta de Calidad Ambiental.

- n. Su solicitud de extensión sometida el 17 de enero de 2014 y la información sometida con fecha del 28 de febrero de 2014 forman parte de esta autorización (Ver Anejo A).

II. APERCIBIMIENTO

La parte adversamente afectada por una resolución u orden parcial o final podrá, dentro del término de veinte (20) días desde la fecha de archivo en autos de la notificación de la resolución u orden, presentar una moción de reconsideración de la resolución u orden.

La agencia dentro de los quince (15) días de haberse presentado dicha moción deberá considerarla. Si la rechazare de plano o no actuare dentro de los quince (15) días, el término para solicitar revisión comenzará a correr nuevamente desde que se notifique dicha denegatoria o desde que expiren esos quince (15) días, según sea el caso. Si se tomare alguna determinación en su consideración, el término para solicitar revisión empezará a contarse desde la fecha en que se archive en autos una copia de la notificación de la resolución de la agencia resolviendo definitivamente la moción de reconsideración. Tal resolución deberá ser emitida y archivada en autos dentro de los noventa (90) días siguientes a la radicación de la moción de reconsideración.

Si la agencia acoge la moción de reconsideración pero deja de tomar alguna acción con relación a la moción dentro de los noventa (90) días de ésta haber sido radicada, perderá jurisdicción sobre la misma y el término para solicitar la revisión judicial empezará a contarse a partir de la expiración de dicho término de noventa (90) días salvo que la agencia, por justa causa y dentro de esos noventa (90) días, prorrogue el término para resolver por un período que no excederá de treinta (30) días adicionales.

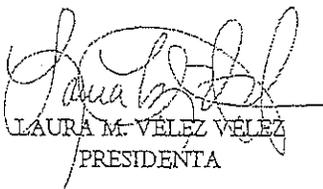
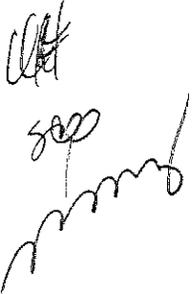
Una parte adversamente afectada por una orden o resolución final de una agencia podrá presentar una solicitud de revisión ante el Tribunal de Apelaciones, dentro de un término de treinta (30) días contados a partir de la fecha del archivo en autos de la copia de la notificación de la orden o resolución final de la agencia o a partir de la fecha aplicable de las dispuestas en 3 L.P.R.A. sec. 2165 cuando el

término para solicitar la revisión judicial haya sido interrumpido mediante la presentación oportuna de una moción de reconsideración.

III. NOTIFICACIÓN:

NOTIFÍQUESE, copia fiel y exacta de esta Resolución mediante correo certificado con acuse de recibo a: Ing. Juan F. Alicea Flores, Director Ejecutivo de la Autoridad de Energía Eléctrica PO Box 364267, San Juan, PR 00936-4267; y personalmente a los siguientes funcionarios de la Junta de Calidad Ambiental: Sr. Ramón Cruz Díaz, Miembro Asociado; Lcda. Suzette M. Meléndez Colón, Miembro Asociado, Sra. María de los Ángeles Ortiz, Miembro Alterno; Lcda. Raquel Román Hernández, Gerente de la Oficina de Asuntos Legales; Sr. Eliud Gerena López, Gerente Interino del Área de Calidad de Aire.

Dada en San Juan, Puerto Rico, a 28 de marzo de 2014.



LAURA M. VÉLEZ VÉLEZ
PRESIDENTA

IV. CERTIFICACIÓN

CERTIFICO: Que he notificado, por correo certificado con acuse de recibo copia fiel y exacta de la Resolución R-14-10 a: Juan F. Alicea Flores, PE, Director Ejecutivo de la Autoridad de Energía Eléctrica, Inc. a la dirección que aparece en la Sección III y mediante correo interno a los funcionarios de la JCA, habiendo archivado el original en autos.

En San Juan, Puerto Rico a 28 de marzo de 2014.



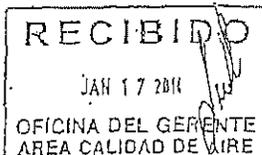
REBECA I. ACOSTA PÉREZ
SECRETARIA
JUNTA DE GOBIERNO



COMMONWEALTH OF PUERTO RICO
Puerto Rico Electric Power Authority

Juan F. Alicea Flores, P.E.
Executive Director

January 15, 2104



Ms. Laura Vélez Vélez, Esq.
Governing Board President
Puerto Rico Environmental Quality Board
Box 11488
San Juan, PR 00910

Dear Ms. Vélez Vélez:

Subject: Aguirre Steam Power Plant Units 1 and 2 - Request for Extension of Initial Compliance Date of the Mercury and Air Toxics Standard (40 CFR Part 63, Subpart UUUUU):

CLF
slp
The Mercury and Air Toxics Standard (MATS) was published by the United States Environmental Protection Agency (USEPA), pursuant to Section 112 of the Clean Air Act (CAA), to establish national emission standards for hazardous air pollutants (NESHAP) limits and work practice standards for pollutants emitted from coal- and oil-fired electric utility steam generating units (EGUs). The requirements established by the MATS are found in the Code of Federal Regulations, Title 40, Part 63, Subpart UUUUU, National Emission Standards for Hazardous Air Pollutants from Coal and Oil Fired Electric Utility Steam Generating Units; and became effective on April 16, 2012, sixty (60) days after being published as a Final Rule in the Federal Register, Vol. 77, No. 32 on February 16, 2012.

According to MATS, the initial compliance date for all applicable coal- and oil-fired EGUs is April 16, 2015. Nevertheless, and pursuant to §112(i)(3)(B) of the CAA, a State with a program approved under Title V of the CAA may issue an extension of the initial compliance date for up to one (1) additional year for an existing source to comply with a standard adopted pursuant to §112(d) of the Act, if such an extension is necessary for the installation of controls (see also 40 CFR §63.6(i)(4)(i)(A)). According to 42 USC §112(i)(3)(B) of the CAA, the Puerto Rico Environmental Quality Board (PREQB) has the delegated authority to approve such extension in the Commonwealth of Puerto Rico.

According to 40 CFR §63.6(i), a request for a first year extension to the initial compliance date must include the following information:

- (A) a description of the controls to be installed to comply with the standard;
and

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- (B) a compliance schedule, including the date by which each step toward compliance is reached, including at a minimum:
- (1) the date by which on-site construction, installation of emission control equipment or a process change is planned to be initiated;
 - (2) the date by which full compliance will be achieved;
 - (3) the date by which on-site construction, installation of emission control equipment, or a process change is planned to be completed; and
 - (4) the date by which full compliance will be achieved.

Based on the above, the Puerto Rico Electric Power Authority (PREPA) hereby submits the following information, in accordance with the requirements to request a first year extension to the initial compliance date, for the Aguirre Steam Power Plant Units 1 and 2 (AG1-2):

I. Description of the Controls to be Installed:

As stated in the *MATS Early Notice of Compliance Plan*, submitted to the Puerto Rico Planning Board, acting as the *Planning Authority*, on April 16, 2013, PREPA determined to convert the boilers from the AG1-2 units from exclusively using No. 6 fuel oil (Bunker C) to enable them to generate power through the combustion of natural gas. Such determination will allow PREPA and the public to take advantage of a cleaner fuel that will result in both the reduction of emission of various NESHAP air pollutants to the environment and achieve compliance with the new MATS requirements.

To complete this natural gas conversion project, both boilers will be retrofitted with natural gas burners in order to utilize natural gas as the primary fuel. The boilers must be shut down to install the natural gas burners system, as well as the associated piping, manifolds and controls required. The natural gas conversion activities include upgrading the material of some of the boiler internal heat transfer elements to make them suitable for dual fuel-firing, as well as the installation of all necessary natural gas combustion system equipment, such as necessary gas supply equipment (piping, valves, controls, etc.), burner hardware (gas burners, combustion air distribution diffusers, isolation valves), etc. Also, the currently installed burner management systems and boiler control systems will be modified to include the logic for the boilers dual fuel firing capabilities. To reduce and maintain NO_x emissions within the required limits, PREPA will acquire and install all necessary equipment (ducts, isolation dampers, expansion joints, tube panels, damper drives, instrumentation, ducting hangers, injection ports, etc.), in order to implement an over fire air (OFA) system. A 24-week outage is estimated on a per unit basis for the changes to take place. Once these conversions are completed, PREPA's AG1-2 will be Natural Gas-Fired EGUs. See 40 C.F.R. §63.10042.

II. Compliance Schedule:

As mentioned in the *MATS Early Notice of Compliance Plan*, the key condition for delaying the installation of the controls in the AG1-2 boilers is the current lack of the required natural gas managing infrastructure in the Island to supply these units with the fuel required. Unlike

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January 15, 2014

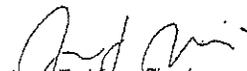
continental states, Puerto Rico is an island in the Caribbean, isolated from the widespread natural gas supply infrastructure existing in the continental United States. Therefore, PREPA's EGUs that are affected by the MATS requirements do not have the same advantage of prompt interconnection to an existing natural gas pipeline system. Developing and constructing such infrastructure is a critical issue that requires resolution in order to achieve the completion of the affected EGUs conversion projects at the AG1-2.

To supply natural gas to these units, PREPA is committed to contract the development of the infrastructure for a natural gas offshore terminal, known as the Aguirre Offshore Gasport (AOGP). Excelerate Energy, LLP was the contractor chosen to develop, construct and operate this gas port, which will be located offshore the Jobos Bay in the municipality of Salinas, along the southern shore of the Commonwealth of Puerto Rico waters. The AOGP is currently in the process of complying with the National Environmental Policy Act, both state and federal, and obtaining the required regulatory and legal approvals, consultations and permits (PREQB, Puerto Rico Department of Natural and Environmental Resources, Puerto Rico Permit Management Office, Puerto Rico Ports Authority, Federal Energy Regulatory Commission, United States Army Corps of Engineers, United States Fish and Wildlife Service, National Marines Fisheries Service, and EPA, among others) prior to commencing its construction. As planned, PREPA anticipates that construction of the AOGP will begin by October 2014 and is expected to be completed by October 2015, therefore delaying the AG1-2 boilers natural gas conversion projects beyond the MATS initial compliance date of April 15, 2015. The conversion project on Unit 1 is planned to begin by October 2014 and to be completed by March 2015. The conversion project on Unit 2 is planned to begin by May 2015 and to be completed by October 2015. These anticipated dates represent a best case timeline for construction of both the AOGP and the conversion of the AG1-2. Due to the complexity of this project, these may be subject to unanticipated delays, such as climate and natural events, delays of other EGUs scheduled outages required for compliance with the USEPA-PREPA Consent Decree, delays in the fabrication and delivery of the required equipment, construction and regulatory permits issuance delays, etc. Based on this information, compliance with MATS for both units is expected to be on or before April 16, 2016.

Considering the above, PREPA respectfully requests PREQB to grant an extension of the MATS initial compliance date until April 15, 2016 for PREPA's AG1-2. This will allow PREPA to install the equipment necessary to complete the conversion projects from fuel oil-fired to natural gas-fired boilers in the AG1-2.

If you have any questions or require additional information, please contact Eng. Sonia Miranda Vega, Planning and Environmental Protection Director, at 787-521-4881.

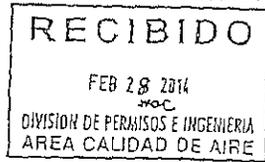
Cordially,


Juan F. Arce Flores
Executive Director

ESTADO LIBRE ASOCIADO DE PUERTO RICO
AUTORIDAD DE ENERGÍA ELÉCTRICA DE PUERTO RICO

SAN JUAN, PUERTO RICO

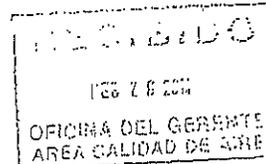
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APARTADO 364267
CORREO GENERAL
SAN JUAN, PR 00936-4267

28 de febrero de 2014

Ing. Eliud Gerena López, Gerente Interino
Área de Calidad de Aire
Junta de Calidad Ambiental
PO Box 11488
San Juan, PR 00917



Estimado ingeniero Gerena López:

Re: Solicitud de Información
Solicitud de Extensión Mercury & Air Toxics Standard (MATS)
PREPA Aguirre Power Station

El 5 de febrero de 2014, recibimos la solicitud de información indicada en el asunto. En esta nos requiere información adicional para evaluar adecuadamente el documento que presentamos el 17 de enero de 2014 con relación a la solicitud de extensión de la fecha inicial de cumplimiento del MATS para las unidades 1 y 2 de la Central Aguirre.

Según su comunicado, la JCA determinó que la solicitud presentada está incompleta, por lo que encontramos pertinente aclarar que la misma se realizó conforme a los requisitos del 40CFR 63.6 y luego de consultar al personal técnico del Programa que usted dirige. El 27 de septiembre de 2013, nuestro personal técnico participó de una reunión con funcionarios del Área de Calidad de Aire de su agencia con el propósito de solicitar nos orientaran e instruyeran con relación al formato a utilizar y la información que requerirían para poder procesar la solicitud de referencia, entre otros. Como resultado de nuestras gestiones, no recibimos ningún tipo de información al respecto por lo que determinamos utilizar de referencia modelos de solicitudes similares sometidas por otras utilidades y aprobadas por otras jurisdicciones de los Estados Unidos. Estos modelos fueron compartidos vía correo electrónico el 2 de octubre de 2013 con el personal del Área que usted dirige con la intención de obtener algún tipo de reacción al respecto antes de preparar y someter nuestra solicitud, sin embargo no recibimos respuesta al respecto (Ver anejos). A base de lo anterior, entendimos en todo momento que la información provista con la solicitud era una completa y razonablemente suficiente para dar curso a la evaluación de la solicitud presentada. No obstante lo anterior y en ánimo de que se pueda dar curso a nuestra solicitud a la brevedad, incluimos la información solicitada. La misma está presentada en el orden que ha sido requerida.

Somos un patrono con igualdad de oportunidades en el empleo y no discriminamos por razón de raza, color, sexo, edad, origen social o nacional, condición social, afiliación política, ideas políticas o religiosas; por ser víctima o ser percibida(o) como víctima de violencia doméstica, agresión sexual o acoso; por impedimento físico, mental o ambos, por condición de veterano(a) o por información genética.

1. Una descripción general de la instalación (PREPA Aguirre) que incluya:

- a. Nombre de la Instalación: PREPA-Aguirre Power Station
- b. Dirección Física: Barrio Montesoría
Carretera PR-3 Km 152.3
Aguirre, Salinas
- c. Número de Permiso TV: PFE-TV-4911-63-0212-0244
- d. Oficial Responsable: Ing. Carlos Castro Montalvo
- e. Persona de Contacto: Ing. Milton Ballester Colón
- f. Teléfono: 787-521-3903/3904

2. Descripción detallada de las Calderas AG1 y AG2:

Las calderas de las unidades AG1-2 son de tipo tangencial, con una capacidad de generación máxima nominal de 450 MW cada una. Estas fueron fabricadas por la compañía *Combustion Engineering, Inc.* y tienen una configuración que resulta típica con generadores de vapor de su capacidad y tamaño. Estas son de tiro balanceado y cuentan con 16 quemadores de combustible, los cuales son atomizados con vapor y están distribuidos en cuatro elevaciones de quemadores en cada esquina de la caldera. Las calderas utilizan combustible residual #6 (Bunker C) con un por ciento de contenido de azufre no mayor de 0.5%/peso, un por ciento de contenido de asfaltos no mayor a 8%/peso y un contenido de vanadio no mayor a 150 ppm/peso. El combustible destilado liviano No. 2 (Diesel) es utilizado como combustible de calentamiento durante las situaciones de arranques fríos de las unidades con el fin de alcanzar las condiciones de suministro de vapor de atomización necesarias para utilizar Bunker C en las mismas. Los quemadores operan con un diferencial de presión entre el vapor de atomización y combustible entre 15-25 psig en cada quemador. Esto corresponde a un diferencial de presión de 25-35 psig entre los cabezales de suministro de combustible y vapor de atomización.

El diferencial de presión entre el horno de la caldera y la caja de vientos (*Windboxes*) y la distribución de aire de combustión hacia cada quemador son controlados por los registros principales y auxiliares de aire. Estos registros controlan el flujo de aire que se suministra a través, por encima y por debajo de cada quemador. La fuente principal del aire para la combustión fluye a través de los registros de aire principales, los cuales se encuentran en el mismo nivel de cada uno de los quemadores. Estos permanecen completamente abiertos mientras el quemador correspondiente se mantenga en servicio. Los registros auxiliares son modulados entre completamente abiertos y completamente cerrados para proveer la presión de aire de combustión requerida en las cajas de vientos.

Con relación al flujo de agua que manejan, estas calderas son de circulación de agua forzada. Estas operan a una presión operacional de vapor principal de 2,660 psig, y a temperaturas del vapor recalentado y sobrecalentado de 1,005°F. Estas unidades están equipadas con serpentinas de vapor, las cuales son ajustadas para mantener una temperatura promedio en el lado frío de los pre-calentadores de aire mayor a 190°F.

Los gases de combustión se distribuyen en dos conductos focalizados luego del economizador. Estos conductos dirigen los gases hacia los dos pre-calentadores de aire y luego hacia los dos abanicos de tiro inducido, los cuales llevan el gas hacia las dos chimeneas de la unidad generatriz. Cada conducto de gas contiene celdas para medir el

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- Bottom left: *Milton Ballester*

exceso de oxígeno en los gases producto de la combustión. Estas están localizadas luego del área del economizador y distribuidas en tres de ellas por cada conducto para un total de seis celdas. Cada chimenea tiene instalado un monitor continuo de opacidad. Las unidades no cuentan con controles de emisiones adicionales.

3. Una demostración de la necesidad de la extensión:

La Autoridad de Energía Eléctrica de Puerto Rico (Autoridad) determinó convertir las unidades AG 1-2 para proveer la capacidad de utilizar gas natural como combustible en lugar de quemar Bunker C exclusivamente como al presente. Esta determinación permitirá a la Autoridad y al pueblo de Puerto Rico tomar ventaja del uso de un combustible más limpio que resultará en una reducción en la emisión de varios contaminantes NESHAP al ambiente, así como lograr cumplimiento con los nuevos requisitos del MATS. La razón principal para la demora en la instalación de controles para cumplir con la nueva reglamentación en AG1-2 radica en la situación actual de falta de una infraestructura de suministro de gas natural en la Isla. Contrario a los Estados Unidos continentales, Puerto Rico es una isla en el Caribe, distante de la amplia disponibilidad de la infraestructura de gas natural que existe en los mismos. Las unidades de la Autoridad que están sujetas a las disposiciones de MATS no tienen la disponibilidad de poder lograr una interconexión rápida a un sistema de suministro de gas natural. Desarrollar y construir esta infraestructura resulta ser el factor crítico para poder lograr el proyecto de conversión de las unidades de AG1-2 y el cumplimiento de las mismas con los requisitos del MATS.

Para suplir gas natural a estas unidades, la Autoridad está comprometida con el desarrollo de un terminal de gas natural conocido como el *Aguirre Offshore GasPort* (AOGP). Esta infraestructura se localizará en altamar, a las afueras de la Bahía de Jobos en Salinas, Puerto Rico. El AOGP se encuentra en el proceso de obtener los permisos, tanto locales como federales, que son requeridos previo a comenzar la construcción del proyecto. La Autoridad anticipa que la construcción del AOGP comenzará en octubre de 2014 y terminará en octubre de 2015. Esto demorará la terminación del proyecto de conversión a gas natural de las unidades AG1-2 más allá de la fecha de cumplimiento inicial del MATS (16 de abril de 2015).

4. Indicar específicamente cada estándar MATS para el cual solicitan la extensión y una justificación para cada uno. Por ejemplo, deberá citar el inciso de la reglamentación MATS e incluir el límite extensión de cumplimiento con el estándar de emisión aplicable (PM, HCL, HF) requisitos de pruebas iniciales de cumplimiento, *recordkeeping, reporting*.

La Autoridad seleccionó demostrar el cumplimiento con las disposiciones de MATS a base de las siguientes determinaciones:

1. Uso de materia particulada filtrable ($PM_{filtrable}$) como subrogado para las emisiones de *Hazardous Air Pollutants* (HAP) metálicos totales. (40CFR 63.9991-Table 2)
2. Analizar y demostrar que el contenido de humedad en el Bunker C utilizado en las calderas no exceda el uno por ciento por peso, en sustitución de los requisitos de monitoreo y cumplimiento con los límites de emisión de ácido fluorhídrico (HF) y ácido clorhídrico (HCl) (40CFR 63.10000).

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3. La implementación de *Work Practice Standards* en sustitución de los requisitos de monitoreo y cumplimiento con los límites de emisión de HAP orgánicos, incluyendo las emisiones de dioxinas y furanos. (*Federal Register*, Vol. 77 No. 32, p. 9371)

La Autoridad solicita la extensión de un primer año de la fecha inicial de cumplimiento (16 de abril de 2015) para todas las disposiciones del MATS (40CFR Parte 63, Subparte UUUUU) aplicables a las unidades AG1-2. De esta forma, se solicita que la fecha de cumplimiento sea el 16 de abril de 2016. La razón para solicitar la extensión radica en la necesidad de tiempo adicional para lograr la instalación de controles y cumplimiento con las disposiciones de MATS. Las disposiciones aplicables a las unidades de referencia incluyen, pero sin limitarse a, lo siguiente:

- *Emission Limits for Existing EGUs (Liquid Oil-Fired Unit – Non-Continental)*: 40CFR 63.9991–Table 2
- *Work Practice Standards (Existing EGU)*: 40CFR 63.9991–Table 3
- *Performance Testing Requirements (Filterable Particulate Matter–PM CEMS)*: 40CFR 63.10007–Table 5
- *Demonstration of Continuous Compliance*: 40CFR 63.10021–Table 7
- *Reporting Requirements*: 40CFR 63.10031–Table 8
- *General Provisions*: 40CFR 63.10040–Table 9
- *Notifications*: 40CFR 63.10030
- *Recordkeeping*: 40CFR 63.10032

5. Descripción detallada de los controles a ser instalados o los cambios de proceso que aseguren cumplimiento con el estándar para PM, HCl, HF específicamente

- a. Deberá explicar y demostrar claramente como el cambio en proceso reducirá las emisiones de PM, HCl, HF a los límites de emisión establecidos en el MATS.

Según discutido en la sección 4 de este documento, la Autoridad optó por demostrar cumplimiento con los límites de emisiones de HF y HCl mediante el certificado de análisis del contenido de humedad en el Bunker C utilizado en las calderas. Con relación a las emisiones de $PM_{\text{filtrable}}$, la Autoridad estima que con el uso de 100% gas natural como combustible primario en las calderas de las unidades AG 1-2 se reducirá las emisiones actuales en aproximadamente un 73 por ciento. Esto debido a que el gas natural es un combustible gaseoso y mucho más limpio que el Bunker C que se utiliza en la actualidad, resultando en una emisión menor de $PM_{\text{filtrable}}$, entre otros. Por otro lado, la determinación de mantener la operación de las unidades AG1-2 bajo la categoría de *Natural Gas-Fired EGU* exime las mismas de los requisitos del MATS. (40CFR 63.9983)

- b. Deberá explicar detalladamente el proyecto de conversión a gas natural.

Para completar el proyecto de conversión a gas natural de las unidades AG1-2, la Autoridad habilitará las calderas con quemadores de gas, con la intención de utilizar gas natural como combustible primario durante la operación normal de las mismas. Para ello, las unidades tendrán que ser retiradas de servicio para poder instalar los componentes del sistema de suministro y combustión de gas natural, tales como tubería, cabezales, válvulas, quemadores, difusores de aire, instrumentación y controles asociados al mismo. Las actividades de conversión incluyen también mejoras al material de algunos de los elementos internos de transferencia de calor existentes en las calderas para habilitarlas para su uso con gas natural. Además, los sistemas de control de las calderas serán actualizados para incluir la lógica relacionada a la integración de los componentes del sistema de combustión con gas natural. Se estima que la duración de los trabajos requeridos es de 24 semanas por cada unidad generatriz.

- c. Deberá establecer el porcentaje de uso de gas natural vs. Bunker C en la instalación.

Una vez se complete el proyecto de conversión, las unidades AG1-2 se denominarán como *Natural Gas Fired EGU's* de acuerdo a la definición en el 40CFR 63.10042. Las calderas operarán en escenarios de uso de 100% gas natural o cualquier combinación de gas natural y Bunker C, pero limitando el consumo de Bunker C a menos de el 10% del valor calorífico anual en periodos de tres (3) años consecutivos o menos de 15% del valor calorífico en cualquier año calendario, según dispone la reglamentación.

- d. Deberá proveer diagramas del proyecto, especificaciones del fabricante, etc.

La AEE está trabajando con diferentes proveedores de equipos para determinar cuales son los sistemas que se instalarán en AG1-2 como parte del proyecto de conversión. Por tal razón, la información disponible es propietaria y confidencial de cada fabricante, por lo que la misma no se puede proveer.

- e. Deberá proveer información necesaria de apoyo: por ejemplo cálculos de emisión comparando el gas natural con el bunker C, etc.

A modo de ejemplo y tomando como referencia el consumo de combustible Bunker C de las unidades AG1-2 durante el 2013 (6,934,074 galones/año), calculamos el equivalente energético de este consumo de combustible:

$$\begin{aligned} \text{Total Heat Input Annual 2013} &= \left(\text{Consumo Anual de BC} \times \frac{42 \text{ galones}}{\text{Bbl}} \right) \times (\text{Valor Calorífico BC}) \\ &= \left(6,934,074 \text{ bbl/año} \times \frac{42 \text{ gal}}{\text{bbl}} \right) \times \left(0.150 \frac{\text{MMBtu}}{\text{gal}} \right) = 40,252,667 \text{ MMBtu/año} \end{aligned}$$

Utilizando el factor de emisiones para combustible Bunker C (FE = 0.051 lbm/MMBtu), calculamos las emisiones anuales de PM_{Filtrable}:

$$\begin{aligned} \text{Total Emisiones Anuales PM}_{\text{Filtrable}} &= [\text{Heat Input Annual}] \times \text{FE} \frac{\text{lbm}}{\text{MMBtu}} \times \frac{1 \text{ ton}}{2,000 \text{ lbm}} \\ &= \left[\left(40,262,667 \frac{\text{MMBtu}}{\text{año}} \right) \right] \times 0.051 \frac{\text{lbm}}{\text{MMBtu}} \times \frac{1 \text{ ton}}{2,000 \text{ lbm}} = 1.027 \text{ tons/año} \end{aligned}$$

Utilizando el factor de emisiones para gas natural (FE = 0.014 lbm/MMBtu), calculamos las emisiones anuales de PM_{Filtrable}:

$$\begin{aligned} \text{Total Emisiones Anuales PM}_{\text{Filtrable}} &= [\text{Heat Input Annual}] \times \text{FE} \frac{\text{lbm}}{\text{MMBtu}} \times \frac{1 \text{ ton}}{2,000 \text{ lbm}} \\ &= \left[\left(40,262,667 \frac{\text{MMBtu}}{\text{año}} \right) \right] \times 0.014 \frac{\text{lbm}}{\text{MMBtu}} \times \frac{1 \text{ ton}}{2,000 \text{ lbm}} = 282 \text{ tons/año} \end{aligned}$$

- f. Deberá aclarar como relacionan los controles (overfire air system) mencionados para NO_x con el MATS. Si se relaciona con el MATS deberá proveer información más detallada sobre el mismo. Si no está relacionado, deberá removerlo de la solicitud.

Con el propósito de controlar las emisiones de NO_x de las unidades AG1-2 y mantenerlas dentro de los límites de emisión permitidos, la Autoridad instalará un sistema de *Over Fire Air* (OFA) en cada una de las calderas. Por ser una medida de control de emisiones de NO_x, la misma no tiene un impacto directo en los límites de la emisión de materia particulada filtrable (PM_{Filtrable}) requeridos en el MATS, pero fue incluida en la solicitud como parte de la descripción de las actividades a realizarse en el proyecto de referencia.

6. Incluir en una tabla para cada unidad de emisión las fechas de cumplimiento como sigue:

Unidad de Emisión	Fecha para la cual se planifica iniciar la construcción o cambio en proceso	Fecha para la cual la construcción o cambio en proceso será completado	Fecha en que se logrará cumplimiento definitivo
AG1	Octubre 2014	Marzo 2015 ⁽¹⁾	16 de abril de 2016
AG2	Mayo 2015	Octubre 2015 ⁽¹⁾	16 de abril de 2016

(1) Sujeto a la construcción y operación de la infraestructura de suministro de gas natural para las unidades (*Aguirre Offshore GasPort*).

7. Una certificación del Oficial Responsable (según definido en la sección 63.2 del 40 CFR):

Según solicitado, incluimos la certificación como anejo.

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Solicitud de Información
Solicitud de Extensión de Cumplimiento
Página 7
28 de febrero de 2014

Nos reiteramos a su disposición para proveer cualquier otra información que sea necesaria para el trámite de este importante asunto. De requerir información adicional puede comunicarse con el Ing. Rafael Marrero Carrasquillo por el (787) 521-4960.

Cordialmente,

Sonia Miranda Vega
Sonia Miranda Vega, Directora
Planificación y Protección Ambiental

Anejos

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CERTIFICACION

Yo, Carlos Castro Montalvo, funcionario responsable designado de la

Autoridad de Energía Eléctrica de Puerto Rico, certifico que:

Con base de información y creencia formada después de una investigación razonable, yo, como funcionario responsable de la Instalación antes mencionada, certifico que las declaraciones y la información contenida en esta solicitud son verdaderas y exactas, y están completas.

Y para que conste, firmo la presente certificación en San Juan de Puerto Rico,
hoy 27 de febrero de 2014.


Firma



STATEMENT OF BASIS - TITLE V PERMIT
PREPA AGUIRRE POWER STATION
PFE-TV-4911-63-0212-0244

The Puerto Rico Environmental Quality Board (EQB) is issuing a Title V permit pursuant to 40 CFR Part 70 and Part VI of the Regulations for the Control of Atmospheric Pollution (RCAP) for the Puerto Rico Electric Power Authority - Aguirre Power Station (PREPA Aguirre). PREPA Aguirre is located in the Road #3 km 152.7 Montesoría Ward in Salinas, Puerto Rico. EQB received a Title V permit application from PREPA Aguirre on February 24, 2012. In September 26, 2013, PREPA requested an amendment to the initial application of the Title V permit.

PREPA Aguirre consists of twelve fuel combustion sources distributed in the following three plants areas: steam power plant consisting of two oil-fired steam electric (boilers) (AG1 and AG2), combined cycle power plant consisting of eight gas turbines (CC1-1, CC1-2, CC1-3, CC1-4, CC2-1, CC2-2, CC2-3 and CC2-4) with two steam electric generators and power block consisting of two oil-fired gas turbines (AGGT2-1 and AGGT2-2) burning liquid fuel. The two boilers (AG1 and AG2) combust primarily no. 6 fuel oil (Bunker C) to generate electricity at a steam turbogenerator. The no. 6 fuel oil has a sulfur content of 0.50% by weight. The two boilers use propane for ignition and the sulfur content is 0.0187% by weight. The combustion turbines or gas turbines of combined cycle that combust no. 2 fuel oil to generate electricity. No. 2 fuel oil has a sulfur content of 0.5% by weight. This facility is a major source for atmospheric pollutants because it has the potential to emit more than 100 tons per year of nitrogen oxides (NO_x), sulfur oxides (SO_x), particule matter (PM₁₀), carbon monoxide (CO) and volatile organic compounds (VOC), which are criteria atmospheric pollutants. It is also a major source of greenhouse gases (GHGs in English) because it has the potential to emit more than 100,000 tons per year, expressed as CO_{2e}. This facility is a major source of hazardous air pollutant emissions (total HAPs, nickel compounds, Manganese compounds, chloride and Formaldehyde compounds).

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 hours of operation of the previous calendar year and using the emission factors of AP-42 (Compilation of Air Pollutant Emission Factors) effective at the time of completing the Title V application.

Pollutants	Permissible Emissions (tons /year)
PM	2,194.88
SO ₂	30,608.58
NO _x	28,867.78
CO	1,299.54
VOC	195.32
Lead	0.63
CO _{2e}	10,093,497.14

Hazardous Air Pollutants (HAP's)	Permissible Emissions (tons /year)
Nickel compounds	20.71
Manganese compounds	19.62
Formaldehyde compounds	14.75
Chloride	84.71
Total HAP's	177.73

The following table summarizes the applicability¹ of PREPA Aguirre with regards to the principal air pollution regulatory programs:

Regulatory Program	Applicability
RCAP- Rules 403, 406, 410 for boilers and combustion turbines	Yes
NSPS (40 CFR Part 60, Subpart GG)	No
NESHAP (MACT- 40 CFR Part 63, Subpart UUUUU)	Yes
NESHAP (MACT-40 CFR Part 63, Subpart YYYY)	No
Title V (40 CFR Part 70) and Part VI of RCAP	Yes
NSPS (40 CFR Part 60, Subpart D)	No
NESHAP (MACT-40 CFR Part 63, Subpart DDDDD)	No

¹ Is important to mention that not all of the permit conditions need to be explained in this document, because the legal and factual bases for the conditions are self-evident as stated in the Title V Operating Permit. This means, that all the applicable requirements are cited in the Title V permit with a reference to the requirement. For example: if the restriction came from a construction permit, the condition will cite the construction permit number, if it came from the regulation it will cite the RCAP specific rule, and if the restriction came from a federal standard, the condition will cite the federal standard or regulation. If the restriction came from the emissions calculation and a cumulative increase, the condition will establish that. Also, state only requirements are clearly identified.

A summary of the emission units, the applicable requirements and the rationale for these requirements are provided below.

Boilers: The capacity of the boilers AG1 and AG2 is 4,180 MMBtu/hr each boiler. The two boilers combust primarily no. 6 fuel oil (Bunker C). The two boilers have a total fuel consumption limit for no. 6 fuel oil of 488,229,840 gallons for any period of twelve (12) consecutive months. The two boilers have a total consumption limit for propane (for ignition and shutdown of the boilers) of 19,018.44 gallons and 803,405.40 gallons of diesel (for warm up only) for any 12 consecutive months. No burning of solid waste or solid materials will be permitted in the boilers.

The two boilers (AG1 and AG2) shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units contained in Subpart UUUUU Part 63 of the Title 40 Code of Federal Regulations (40 CFR). The conditions of Subpart UUUUU, Part 63 of the 40 CFR for the two boilers are in Section V (A) of the Title V permit.

- PM emission limit: Rule 406 of the RCAP establishes an emission limit of 0.3 lb of particulate matter per MMBtu of heat input demonstrated by performing a stack test during the first year of the permit using EPA Test Method 5.
- Sulfur content: The Rule 410 of the RCAP provides for sulfur content limit in fuels (fuel oil no. 6 and propane). The no. 6 fuel oil used shall not have a sulfur content in excess of 0.50% by weight. The propane that is used for ignition and shutdown of the boilers may not have a sulfur content in excess of 0.0187% by weight. The same rule and also the permit requires the sulfur content to be monitored daily and reported monthly to the Board. PREPA shall sample the fuels 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, except for propane that will only need the supplier certification.
- Opacity: As required by Rule 403 of the RCAP, the units shall not exceed the opacity limit of 20% in 6 minutes average. The permit requires a continuous emission monitoring systems, one opacity reading to the stack of each boilers during the first year of the permit using EPA Test Method 9 and subsequent biweekly opacity visual inspections using a reader certified by a school approved by EPA or the Board.

- National Emission Standards for Hazardous Air Pollutants Coal- and Oil-Fired Electric Utility Steam Generating Units contained in Subpart UUUUU of 40 CFR Part 63: This regulation is intended to reduce emissions of heavy metals, including mercury, arsenic, chromium, nickel and acid gases, including hydrochloric acid (HCl) and hydrofluoric acid (HF). These regulations set limits for PM emission number (as a surrogate for all toxic metals), HCl and HF. The permittee shall demonstrate compliance with the limits for HCl and HF limiting the moisture content in the liquid fuel. Also, working practices are established, instead of numerical limits, to limit emissions of toxic organics, including dioxins and furans. Because dioxins and furans are the result of inefficient combustion, the standards applicable work practice require an annual performance test program for each unit, which includes inspection, adjustment and / or maintenance and repairs to ensure optimal combustion in each unit.

PREPA had to comply with the applicable requirements of the National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units contained in Subpart UUUUU of 40 CFR Part 63, better known as Mercury Air Toxic Standards (MATS), on or before April 16, 2015, or the date specified in the extension or extensions of compliance that are granted by the Environmental Quality Board and Federal Environmental Protection Agency pursuant to 40 CFR §63.6(i). As established in the conditions of Section VA1.i of the draft permit, the Board could extend the date of compliance with MATS for 1 additional year (the original compliance date is April 16, 2015) under Section 112 (i)(3)(B) of the Clean Air Act. The Board received no adverse comments regarding the alternative extension for 1 additional year to comply with MATS during the public review period. EQB revised these terms of compliance with MATS included in the draft permit, to reflect the compliance extension for 1 additional year, approved by the Board for AG1 and AG2 boilers. The extent of compliance was authorized with additional conditions in order to provide additional time for the installation of the necessary equipment in these units to burn natural gas as the primary fuel in these boilers AG1 and AG2. The secondary fuel will be Bunker C (fuel oil No. 6). Due to the compliance extension approved, EQB revised the conditions to include the new compliance date for these boilers that will be April 16, 2016, and incorporated the terms of the compliance extension as established in Resolution R-14-10 signed on March 28, 2014. This includes a schedule of compliance, reporting and notification requirements, among others. These changes do not affect the MATS emission limits or any other MATS applicable condition.

Combustion turbines: The capacity of each combined cycle turbine (CC1-1, CC1-2, CC1-3, CC1-4, CC2-1, CC2-2, CC2-3 and CC2-4) is 607.5 MMBtu/hr. The capacity of each turbine (AGGT2-1 and AGGT2-2) is 301.5 MMBtu/hr. These ten turbines have a total fuel consumption limit for no. 2 *fuel oil* of 354,482,160 gallons for any period of twelve (12) consecutive months. The permit also requires to record and report the fuel consumption to the Board monthly. Since the units were built before October 3, 1977, no control device is required for these units by any applicable requirement and they are not affected by the New Source Performance Standards (NSPS) for Stationary Gas Turbines in 40 CFR Part 60 Subpart GG. Although no federal requirements are applicable to these units, the units are subject to following RCAP limitations.

- **PM emission limit:** The Rule 406 of the RCAP establishes an emission limit of 0.3 lb of particulate matter per MMBtu of heat input demonstrated by the type of fuel and AP-42 (Compilation of Air Pollutant Emission Factors) emission factors to the unit.
- **Sulfur content:** Rule 410 of the RCAP provides for sulfur content limit in fuel. The no. 2 fuel oil used shall not have a sulfur content which exceeds 0.5 % by weight. The same rule and also the permit require the sulfur content to be monitored daily and reported to the Board monthly. PREPA Aguirre 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.
- **Opacity:** As required by Rule 403 of the RCAP, the units shall not exceed the opacity limit of 20% (6 minutes average), except for one period of not more than four (4) minutes in any consecutive 30 minutes interval when the opacity shall not exceed 60%. The permit requires one opacity reading to the stack of each combustion turbine during the first year of the permit using EPA Test Method 9 and subsequent visual inspections using biweekly opacity visible emissions reader certified by a school approved by EPA or the Board.
- **National Emission Standards for Hazardous Air Pollutants for combustion turbines contained in 40 CFR Part 63, Subpart YYYY:** Any existing, new, or reconstructed source that have or operates stationary combustion turbines, is subject to the National Emission Standards for Hazardous Air Pollutants for Combustion Turbines contained in 40 CFR Part 63, Subpart YYYY.
 - a. According to 40 CFR section 63.6090, the existing stationary combustion turbines in all subcategories does not have to comply with the requirements of

this Subpart YYYY or 40 CFR Part 63 Subpart A. No initial notification is necessary for any existing internal stationary combustion turbine, even if a new or reconstructed turbine in the same category would require an initial notification.

- b. If one of the turbines was reconstructed according to the definition of reconstruction in section 63.2, subpart A, and if the reconstruction began or will begin after January 14, 2003, the unit must comply with the applicable requirements of this Subpart YYYY.

All the monitoring, record keeping, and reporting provisions are applicable pursuant to Rule 603 of the RCAP that requires that these elements shall be included in the Title V permit issued.

As established in Appendix B of the RCAP, PREPA Aguirre provided a list of insignificant activities (Section VIII of the permit) (storage tanks, fuel oil and light oil discharge docks, etc.) because of size or production rate.

EQB found that PREPA Aguirre Power Station Title V permit (owned by Puerto Rico Electric Power Authority) satisfies the requirements of Part VI of the RCAP.

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