

**COMMONWEALTH OF PUERTO RICO / OFFICE OF THE GOVERNOR**

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



<b>Permit Number:</b>	PFE-TV-4911-57-0899-0006
<b>Permit Application Received:</b>	August 11, 1999
<b>Issue and/or Effectiveness Date:</b>	September 30, 2005
<b>Expiration Date:</b>	September 30, 2010

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

**ECOELÉCTRICA, L.P.  
PEÑUELAS, PUERTO RICO**

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

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

## TABLE OF CONTENTS

Section I	General Information.....	3
	A. Facility Information.....	3
	B. Process Description.....	3
Section II	Emission Units Descriptions.....	5
Section III	General Permit Conditions.....	6
Section IV	Potential Emissions.....	15
Section V	Permit Specific Conditions.....	16
	A. Facility Operations.....	16
	B. Requirements per Emission Unit.....	17
Section VI	Recordkeeping Requirements.....	41
Section VII	Reporting Requirements.....	43
Section VIII	Insignificant Emission Units.....	49
Section IX	Permit Shield.....	50
	A.1. Non Applicable Requirements.....	50
	A.2. Reasons for Non Applicability.....	51
Section X	Permit Approval.....	51
Appendixes	.....	52
Appendix I	Definitions and Abbreviations.....	53
Appendix II	Control Devices.....	56
Appendix III	Steam/water injection system optimum water to fuel ratio.....	57
Appendix IV	EcoEléctrica, L.P Performance Tests.....	58
Appendix V	Monitoring Equipment adjustment and calibration requirements.....	60

## Section I – General Information

### A. Facility Information

Name of the Company:	EcoEléctrica, L.P.
Mailing Address:	Road 337, Km 3.7 Firm Delivery
City:	Peñuelas
State:	Puerto Rico
Zip Code:	00624-7501
Plant Name:	EcoEléctrica, L.P.
Plant Localization:	Road 337, Km 3.7 Bo. Tallaboa Poniente Peñuelas, P.R.
Plant Mailing Address:	Road 337 Km 3.7 Firm Delivery Peñuelas, P.R. 00624-7501
Responsible:	Ernesto Córdova General Manager
Phone:	787-759-0202
Facility Contact Person:	Ivette Laborde Environmental Compliance Manager
Phone:	787-836-2740
Fax:	787-836-2260
Primary SIC Code:	4911

### B. Process Description

EcoEléctrica is located in Punta Guayanilla Bay in Peñuelas, Puerto Rico and occupies a 36-acre site. EcoEléctrica propose the operation a marine unloading terminal for liquefied natural gas and a combined cycle cogeneration plant. The facility will provide additional electric power to the Puerto Rico Electric Power Authority (PREPA).

The combined cycle cogeneration plant has a power output of 507 to 545 MW and includes two Westinghouse 501F (EU-CT1 and EU-CT2) combustion gas turbines that use natural gas as a primary fuel, liquefied petroleum gas (LPG) as a secondary fuel and No. 2 oil as a backup fuel. The exhaust gases from the combustion turbines EU-CT1 and EU-CT2 will be routed to the heat recovery steam generators (HRSG) to produce steam. Each HRSG receives supplemental heat input from the duct burners (EU-DB1 y EU-DB2) that will only burn LNG or LPG. The steam produced in the HRSG units will be routed to a steam turbine generator and to a desalination plant to provide heat for the seawater distillation process. There will also be an auxiliary diesel-cycle generator (EU-GEN) for emergency purposes.

The other aspect of this project consists of a four-arm LNG tanker marine unloading facility (EU-TERM), two (one existing and one planned for the future) LNG storage tanks (EU-LNG), vaporizations systems, one LPG storage tank (EU-LPG) and one No. 2 fuel oil storage tank (EU-TK1). A safety flare capable of burning natural gas or LPG will be used for LNG/LPG vaporizing systems.

LNG from the storage tanks will be vaporized to form natural gas, which will be used as fuel in the combustion turbines. The gas turbines will use natural gas as primary fuel and LPG (propane) as a secondary fuel. Low sulfur No. 2 oil is only used for combustion turbines (EU-CT1 and EU-CT2).

Other facility processes are a sea cooling tower system (EU-SWCT y EU-SWCTH), a desalination plant with demineralization to produce potable water for the Puerto Rico Aqueduct and Sewer Authority system for Guayanilla and supply demineralized water for the Costa Sur PREPA facility.

EcoEléctrica is classified as a major stationary source because it has the potential to emit more than 100 tons per year of oxides of nitrogen (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and particulates (PM). The facility is subject to the Prevention of Significant Deterioration (PSD) standards for oxides of nitrogen, sulfur dioxide, carbon monoxide, particulate matter, particulate matter less than 10 microns (PM<sub>10</sub>), and volatile organic compounds (VOC).

EcoEléctrica will employ Best Available Control Technology (BACT) to control the pollutants mentioned above. BACT consist in the use of two Selective Catalytic Reduction (SCR) systems, steam injection system, a flare, continuous emission monitoring systems, and the implementation of good combustion practices.

## Section II – Emission Units Description

A. The emission units regulated by this permit are the following:

Emission Unit	Description	Control Device <sup>1</sup>
EU-CT1	One Westinghouse 501F combustion gas turbine with a power output of 175 MW.	CD-SCR1
EU-CT2	One Westinghouse 501F combustion gas turbine with a power output of 175 MW.	CD-SCR2
EU-DB1	Duct Burner (480 MMBtu/hr) that provides supplemental heat input to the heat recovery steam generator (HRSG).	CD-SCR1
EU-DB2	Duct Burner (480 MMBtu/hr) that provides supplemental heat input to the heat recovery steam generator (HRSG).	CD-SCR2
EU-GEN	Auxiliary diesel generator of 1280 kW.	
EU-TERM	Four arm LNG tanker marine unloading facility. Three arms for liquid delivery to the LNG storage tanks and one for vapor return to the ship.	
EU-LNG	Two 42 million gallons LNG storage tanks (one future) and a vaporization system.	CD-FL
EU-LPG	LPG storage tank, bullet type with a capacity of 90,000 gallons and a vaporization system.	CD-FL
EU-TK1	Diesel tank with a capacity of 9.1 million gallons.	Fixed roof
EU-TK2	Ammonia tank with a nominal capacity of 15,000 gallons.	
EU-SWCT	Cooling tower consisting in eight cells designed to reject heat from the atmosphere from the steam turbines condensers.	CD-ME
EU-SWCTH	Helper cooling tower is designed to supplement the main cooling tower on the hottest and most humid days of the year. This consists of two cells.	CD-ME

<sup>1</sup> See Appendix II for Control Device Descriptions.

### Section III - General Permit Conditions

1. **Sanctions and Penalties:** EcoEléctrica is obligated to comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Any violation of the terms of this permit will be subject to administrative, civil or criminal penalties as established in the Puerto Rico Environmental Public Policy Act, Article 16 (Act Number 416, September 22, 2004).
2. **Right of Entry:** As specified under Rules 103 and 603(c)(2) of the RCAP, EcoEléctrica shall allow the Board 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 emissions 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, EcoEléctrica 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 will be available for any representative of the Board at any time.

6. **Control Equipment:** EcoEléctrica shall comply with Rule 108 of the RCAP, as follows:
- (A) All air pollution control equipment or control measures shall provide for continuous compliance with applicable rules and regulations. Such equipment or measures shall be installed, maintained, and operated according to those conditions imposed by the Board, within the specified operating limitations of the manufacturer.
  - (B) The collected material from air pollution control equipment shall be disposed in accordance with applicable rules and regulations. The removal, manipulation, transportation, storage, treatment or disposal will be done in such or manner that shall not to produce environmental degradation, and in accordance with applicable rules and regulations.
  - (C) The Board may require, when deemed appropriate to safeguard the health and welfare of human beings, the installation and maintenance of additional, complete and separate air pollution control equipment of a capacity equal to the capacity of the primary control equipment. Furthermore, the Board may require that such additional air pollution control equipment be operated continuously and conjunctionally with the primary air pollution control equipment.
  - (D) All air pollution control equipment shall be operated at all times while the source being controlled is in operation.
  - (E) EcoEléctrica shall to the extent possible, maintain and operate at all times, including periods of start-up, shutdown and malfunction, any affected source and the associated air pollution control equipment, in a manner consistent with the original manufacturers design specifications and in compliance with applicable rules and regulations and permit conditions.
7. **Regulatory Compliance:** As specified under Rule 115 of the RCAP, any violation to the RCAP, or to any other applicable rule or regulation, shall be grounds for the Board to suspend, modify, or revoke any relevant permit, approval, variance or other authorization issued by the Board.
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 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 construction permit under Rule 203 of the RCAP.
9. **Open Burning:** As specified under Rule 402 of the RCAP, EcoEléctrica shall not cause or permit the open burning of refuse in their premises except as established under Rule 402 (E) of the RCAP.

**10. Particulate Fugitive Emissions:** As established in Rule 404 of the RCAP, EcoEléctrica 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.

**11. Objectionable Odors:** As specified under Rule 420 of the RCAP, EcoEléctrica shall not cause or permit emissions to the atmosphere of any matter which produces an *objectionable* odor that can be perceived on an area other than that designated for industrial purposes. EcoEléctrica shall demonstrate compliance with Rule 420 (A)(1) as follows: if malodors are detectable beyond the properties designated for industrial purposes, and complaints are received, EcoEléctrica shall investigate and take measures to minimize and/or eliminate the malodors, if necessary. [This condition is enforceable only by the State].

**12. Permit Renewal Applications:** As established under Rule 602 (a)(1)(iv) of the RCAP, the permittee's applications for permit renewal shall be submitted at least 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.

**13. 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 5 years from the date of effectiveness. 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 EcoEléctrica submits a complete renewal application at least 12 months before the expiration date. [Rules 603 (a)(2), 605 (c)(2), and 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 the permit is renewed if a timely and complete renewal application is submitted.
- c) In 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.

**14. Recordkeeping Requirement:** As established under Rule 603(a)(4)(ii) of the RCAP, EcoEléctrica shall retain records of all required monitoring data and support information for a period of 5 years from the date of the monitoring sample, measurement, report, or application.



15. **Reporting Requirement:** As established under Rule 603(a)(5)(i) of the RCAP, EcoEléctrica shall submit reports of all required monitoring every 6 months, or more frequently if required by the Board or any other underlying applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. A responsible official as established under Rule 602(c) (3) of the RCAP must certify all required reports.
16. **Deviations Reporting due to Emergencies:** As specified under Rule 603(a)(5)(ii)(a) of the RCAP, any deviation from the requirements of this permit resulting from an upset (such as sudden failure or break-down) or emergency conditions, as defined in Rule 603(e) of the RCAP, must be reported within the next 2 working days. Such notification may be used to assert an affirmative defense upon an enforcement action against EcoEléctrica. If EcoEléctrica raises the emergency defense upon an enforcement action, EcoEléctrica 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 in 48 hours, whichever occurs first. The Board may only extend the operation of an emission source in excess of 48 hours, if the source demonstrates to the Board's satisfaction that the National Air Quality Standards have not been exceeded and that there is no risk to the public health.
17. **Deviation Reporting (Hazardous Air Pollutants):** The source shall shut down its operations immediately or shall act as specified in its Emergency Response Plan (established in Rule 107 (C) of the RCAP), when such Plan has demonstrated that there is no significant impact at the properties not designated for industrial purposes. [This condition is enforceable only by the State]. Pursuant to Rule 603 (a)(5)(ii)(b), a notification will be required if a deviation occurs that results in the release of emissions of hazardous air pollutants for more than an hour in excess of the applicable limit. EcoEléctrica shall notify the Board within 24 hours of the deviation. For the discharge of any regulated air pollutant that continues for more than 2 hours in excess of the applicable limit, EcoEléctrica shall notify the Board within 24 hours of the deviation. EcoEléctrica shall also submit to the Board, within seven (7) days of the deviation, a detailed written report, which includes probable causes, time and duration of the deviation, remedial action taken, and steps, which are being taken to prevent a reoccurrence.
18. **Severability Clause:** As established 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.
19. **Permit Noncompliance:** As established under Rule 603(a)(7)(i) of the RCAP, EcoEléctrica must comply with all conditions of this 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.

20. **Defense not Allowed:** As specified under Rule 603(a)(7)(ii) of the RCAP, it shall not be a defense for EcoEléctrica 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.
21. **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. The filing of a request by EcoEléctrica for a permit modification, revocation, reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
22. **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.
23. **Obligation to Furnish Information:** As specified under Rule 603(a)(7)(v) of the RCAP, EcoEléctrica 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, EcoEléctrica shall also furnish to the Board copies of records required to be kept by the permit.
24. **Changes in Operating Scenarios:** As specified under Rule 603(a)(10) of the RCAP, EcoEléctrica shall record in a logbook, contemporaneously with making a change from one operating scenario to another, the scenario under which it is operating. This logbook must be kept at EcoEléctrica's facility at all times.
25. **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 as of the application completeness date. 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.
26. **Administrative Permit Amendments and Permit Modifications:** As specified under Rule 606 of the RCAP, the permit shall not be amended nor modified unless EcoEléctrica complies with the requirements for administrative permit amendments and permit modifications as described in the RCAP.
27. **Permit Reopenings:** As specified under Rule 608(a)(1), this permit shall be reopened and revised under any of the following circumstances:
  - a) Whenever additional applicable requirements under any law or regulation become applicable to EcoEléctrica, when the remaining permit term is of 3 or more years. Such reopening shall be completed 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 Board or 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 Board or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

28. **Changes in Name and/or Ownership:** This permit is issued to EcoEléctrica, L.P. In the event that the company and/or installation changes its name or is transferred to a different owner, the new responsible official must submit a sworn statement in which he/she accepts and promises to comply with all conditions of this permit.

29. **Renovation/Demolition Work:** EcoEléctrica shall comply with the provisions set forth in 40 CFR 61.145 and 61.150, and Rule 422 of the RCAP when conducting any renovation or demolition activities of asbestos containing materials at the facility.

30. **General Duty Clause:** EcoEléctrica shall have the general duty of identifying hazards which may result from accidental releases of controlled substances (ammonia in this case) 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 established by section 112(r) of the Clean Air Act and Rule 107(D) of the RCAP.

31. **Requirements for Refrigerants (Climatologic and Stratospheric Ozone Protection):**

- a) In the event that EcoEléctrica has equipment or appliances, including air conditioning units, which use Class I or II refrigerants as defined in 40 CFR 82, Subpart A, Appendices A and B, he/she shall take the necessary measures to ensure that all maintenance, service or repair services performed are done so according to the practices, certification and personnel requirements, disposal requirements, and recycling and/or recovery equipment certification requirements specified under 40 CFR 82, Subpart F.
- b) Owners/ operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- c) **Service on Motor Vehicles:** If EcoEléctrica 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), EcoEléctrica is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term motor vehicle as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo or system used on passenger buses using HCFC-22 refrigerant.

32. **Emergency Generators:** The operation for each emergency generator identified as insignificant activity is limited to 250 hours per year. [PFE-03-31-0696-0044-I-II-C]
33. **Roof Surface Coating:** This is a state-only requirement. EcoEléctrica 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. This requirement will not apply to activities where tar or sealing material is applied without heat and such material is asbestos-free.
34. **Compliance Clause:** Under no circumstances does compliance with this permit exempt EcoEléctrica from complying with all other applicable state or federal laws, regulations, permits, administrative orders or applicable court orders.
35. **Annual fee:** As specified under Rule 610 of the RCAP, EcoEléctrica must submit an annual payment based on the emissions calculations for each regulated pollutant. The payment will be based on their actual emissions at a rate of \$37.00 per ton, unless the Board decides otherwise as permitted under Rule 610(b)(2)(iv) of the RCAP. This payment for the previous year must be made on or before June 30 of each year.
36. **Reservation of Rights:** Except as expressly provided in this Title V permit:
- a) Nothing herein shall prevent EPA or the Board from taking administrative enforcement measures or seeking legal or equitable relief to enforce the terms of the Title V permit, including but not limited to the right to seek injunctive relief, and imposition of statutory penalties, fines and/or punitive damages.
  - b) Nothing herein shall be construed to limit the rights of EPA or the Board to undertake any criminal enforcement activity against EcoEléctrica 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 the permittee's rights to administrative hearing and judicial appeal of termination/ revocation/denial actions in accordance with regulations and the Environmental Public Policy Act.
37. **Source Modifications without a permit revision:** According to Rule 607 of the RCAP, EcoEléctrica may perform:
- (a) Source changes
    - (1) Permitted sources may make Section 502(b)(10) changes without requiring a permit revision, if the changes are not modifications under any provision of Title I of the

Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions).

- (i) For each such change, the facility must provide the Administrator and the Board with written notification in advance of the proposed changes, which shall be seven (7) days. The written notification shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. The source, the Board, and EPA shall attach each such notice to their copy of the relevant permit.
  - (ii) The permit shield described in paragraph (d) of Rule 603 shall not apply to any change made pursuant to section (a)(1) of Rule 607.
- (2) Permitted sources may trade increases and decreases in emissions in the permitted facility for the same pollutant, where the permit provides for such emissions trades without requiring a permit revision and based on the 7-day notice prescribed in section (a)(2) of Rule 607. This provision is available in those cases where the permit does not already provide for such emissions trading.
  - (i) Under paragraph (a)(2) of Rule 607, the written notification required shall include such information as may be required by the provision in the Puerto Rico State Implementation Plan (PR-SIP) authorizing the emissions trade, including when the proposed change will occur, a description of each such change, any change in emissions, the permit requirements with which the source will comply using the emissions trading provisions of the PR-SIP, and the pollutants emitted subject to the emissions trade. The notice shall also refer to the provisions with which the source will comply in the PR-SIP and that provide for the emissions trade.
  - (ii) The permit shield described in paragraph (d) of Rule 603 shall not extend to any change made under section (a)(2) of Rule 607. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the applicable implementation plan authorizing the emissions trade.
- (3) If a permit applicant requests it, the Board shall issue permits that contain terms and conditions (including all terms required under sections (a) and (c) of Rule 603 to determine compliance) allowing for the trading of emissions increases and decreases in the permitted facility solely for the purpose of complying with a federally-enforceable emissions cap. Such a cap must be established in the permit independent of otherwise applicable requirements. The permit applicant shall include in its application proposed replicable procedures and permit terms that ensure the emissions trades are quantifiable and enforceable. The Board shall not be required to include in the emissions trading provisions any emissions units for which emissions are not quantifiable or for which there are no replicable procedures

to enforce the emissions trades. The permit shall also require compliance with all applicable requirements.

- (i) Under section (a)(3) of Rule 607, the written notification required shall state when the change will occur and shall describe the changes in emissions that will result and how these increases and decreases in emissions will comply with the terms and conditions of the permit.
  - (ii) The permit shield described in paragraph (d) of Rule 603 may extend to terms and conditions that allow such increases and decreases in emissions.
- (b) Off-Permit Changes. The Board may allow changes that are not addressed or prohibited by the permit and/or State Law.
- (1) A permitted facility may make changes without obtaining a permit revision if such changes are not addressed or prohibited by the permit, other than those described in paragraph (c) of Rule 607.
    - (i) Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition.
    - (ii) Sources must provide contemporaneous written notice to the Board and EPA of each such change, except for changes that qualify as insignificant under paragraph (c)(1) of Rule 602. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply because of the change.
    - (iii) The change shall not qualify for the shield under paragraph (d) of Rule 603.
    - (iv) The permittee shall keep a record describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- (c) A permitted facility cannot make changes without a permit revision if such changes are modifications under any provision of Title I of the Act.
38. (a) EcoEléctrica may make changes under section 502(b)(10) of the Act without requiring a permit revision if such changes:
- (1) are not modifications under any provision of Title I of the Act,
  - (2) do not exceed the allowable emissions under the permit,
  - (3) do not result in the emission of any pollutant not previously emitted,

- (4) do not violate any applicable requirement or contravene federally enforceable terms and permit conditions such as monitoring (including test methods), recordkeeping, reporting and compliance certification requirements,
  - (5) are not changes under Title I of the Act to an emission limit, a work practice or a voluntary emission cap.
- (b) Rule 203 of the RCAP is required for any construction or modification of an emission source. For purposes of part II of the RCAP, a modification is defined as any physical change in, change in the method of operation or a change in type of fuel used of an existing stationary source, that would result in a net increase in that stationary source's potential to emit any air pollutant (subject to any standard), or which results in the emission of any pollutant (subject to an standard) not previously emitted. A physical change shall not include routine maintenance, repair and the replacement of any equipment having the same capacity, equal efficiency or greater environmental benefit to be used for the same purpose.
- (c) The written notification addressed in condition 37(a)(1)(i) refers to changes covered under condition 37(a)(1). Changes not covered will be processed under the requirements of Rule 203 of the RCAP.
- (d) Any emission trading as provided in condition 37(a)(2) above will not be authorized if the facility does not provide the reference to the PR-SIP provisions authorizing such emissions trading.
- (e) If EcoEléctrica requests so, the Board may allow the emission trading in the facility solely for the purpose of complying with a federally-enforceable emissions cap. The application shall be based in replicable procedures and shall include permit terms that ensure the emission trades are quantifiable, replicable and enforceable.
- (f) Off- permit changes will not be exempt from complying with the requirements and procedures of Rule 203 of the RCAP, if applicable.

#### **Section IV – Potential Emissions**

- A. The emissions described on the following table represent the facility potential emissions at the moment of the permit application and will be used only for payment purposes. According to Resolution R-97-47-1, the emission calculations shall be based on EcoEléctrica's actual emissions, although calculations based on the facility permissible emissions will be accepted. If EcoEléctrica decides to perform the calculations based on permissible emissions, EcoEléctrica shall pay the same charge per ton as the facilities that decides to do the calculations based on actual emissions. Also, when EcoEléctrica applies for a modification, administrative change or minor modification to its Title V permit, the source will pay only those charges related with any emission increase (if any)

per tonnage, based on the change and not based on the total fees paid previously according to Rule 610(a) of the RCCAP.

<b>Pollutant</b>	<b>Potential Emissions (ton/year)</b>
PM <sub>10</sub>	450
SO <sub>2</sub>	182.61
NO <sub>x</sub>	561.02
CO	1179.8
VOC	96.90
Pb	0.38
H <sub>2</sub> SO <sub>4</sub>	5.40
NH <sub>3</sub>	227.20

## **Section V – Permit specific conditions**

### **A. Facility Operations**

1. All equipment, facilities, and systems, including the combustion and electric generation units, installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. The continuous emission monitoring systems required by this permit shall be on-line and in operation 95% of the time when turbines are operating. [PFE-03-31-0696-0044-I-II-C]
2. EcoEléctrica shall operate the combustion turbines and the duct burners at appropriate load conditions depending on the ambient temperature such that the facility's projected maximum yearly emission rate shall not be exceeded as follows:

<b>Pollutant</b>	<b>Emission Rate (ton/year)</b>
Particulate matter - total	450
Particulate matter less than 10 microns (PM-10)	450
Sulfur dioxide	182



Pollutant	Emission Rate (ton/year)
Nitrogen oxides	560
Carbon monoxide	1179
Volatile Organic Compounds	96

- Risk Management Plan (RMP): EcoEléctrica is subjected to 40 CFR Part 68, Subpart G because the facility exceeds the threshold quantities for ammonia.
- Every requirement and emission limit identified in this permit comes from the construction permit PFE-03-31-0696-0044-I-II-C, except those conditions where other referenced requirement is specified.

## B. Requirements per Emission Unit

### 1. EU-CT1 and EU-CT2 – Combustion Turbines

Condition	Parameter	Value	Units	Test Method	Frequency	Record-Keeping	Reporting Frequency
Opacity Limit	Opacity	20	Percent	COMS	Continuous	Logbook	Excess emissions report every three months
				Method 9	See Appendix IV	Test results	Sixty days after test
Sulfur content limit	Diesel	0.04	Percent by weight	Fuel analysis	With every receipt	Analysis results	Monthly
	LNG LPG	0.8					
Nitrogen content limit	Nitrogen content	0.10	Percent by weight	Fuel analysis	With every receipt	Analysis results	Monthly
NOx Emission Limit	NOx (3-hour average)	60	Pounds per hour for LNG or diesel.	Method 7E	See Appendix IV	Test results	Sixty days after test
		73	Pounds per hour for LPG.				

Condition	Parameter	Value	Units	Test Method	Frequency	Record-Keeping	Reporting Frequency
NOx Concentration Limit	NOx (3-hour average)	7	ppmdv @ 15% O <sub>2</sub> for LNG	CEM	Continuous	Logbook	Excess emissions report every three months
		9	ppmdv @ 15% O <sub>2</sub> for LPG or diesel.				
SO <sub>2</sub> Emission Limit	SO <sub>2</sub> (3-hour average))	70.5	Pounds per hour for diesel.	Emission calculations based on sulfur content and consumption	See Appendix IV	Calculations results logbook	Annually
CO Emission Limit	CO (3-hour average)	244	Pounds per hour for any fuel	Method 10	See Appendix IV	Test results	Sixty days after test
CO Concentration Limit	CO (3-hour average)	33	ppmdv @ 15% O <sub>2</sub> at 75% and maximum load	CEM	Continuo	Logbook	Excess emissions report every three months
		100	ppmdv @ 15% O <sub>2</sub> at minimum load				
PM/PM-10 Emission Limit	PM/PM-10 (3-hour average)	12	Pounds per hour for LNG or LPG.	Method 5 for PM Method 201 or Method 201(A) for PM-10 or Method 202	See Appendix IV	Test results	Sixty days after test
		59	Pounds per hour for diesel.				
		0.0053	Lbs/MMBtu (HHV) for LNG or LPG.				
		0.0390	Lbs/MMBtu (HHV) for diesel.				

Condition	Parameter	Value	Units	Test Method	Frequency	Record-Keeping	Reporting Frequency
VOC Emission Limit	VOC (1-hour average measured as methane)	13.8	Pounds per hour for any fuel at or above minimum load	Method 18 and Method 25A	Annually subject to approval of request to discontinue the tests. See Appendix IV	Test results	Sixty days after test
VOC Concentration Limit	VOC (1-hour average measured as methane)	5	ppmdv @ 15% O <sub>2</sub> at 75% and maximum				
		8	ppmdv @ 15% O <sub>2</sub> at minimum load				
Ammonia Concentration Limit	NH <sub>3</sub>	10	ppmdv @ 15% O <sub>2</sub>	Maintain optimum ammonia flow rate at the SCR	Continuous	Logbook	Annually
Fuel type	LNG LPG Diesel	N/A	N/A	Record of type of fuel burned	Daily	Logbook	Every six months
Fuel consumption limit	Diesel	12,500 (3-hour average)	Gallons per hour based on 138,750 Btu/gal (HHV)	CMS	Daily	Logbook	Monthly
Combined fuel consumption limit	Diesel	54	Million gallons per 365 days rolling period	Record fuel consumption	Daily	Logbook	Every six months
Heat Input Rate	LNG	1,911	MMBtu/hr (HHV)	Record heat input rate	Daily	Logbook	Every six months
	LPG	1,801	MMBtu/hr (HHV)				
Load Limit	Load	Above minimum load (performance test)	MW	Record of power generated per hour	Daily	Logbook	Every six months

Condition	Parameter	Value	Units	Test Method	Frequency	Record-Keeping	Reporting Frequency
Startup, shutdown and fuel switch duration limit	Duration	1	hour	Record of startup, shutdown and fuel switch periods duration	Daily	Logbook	Every six months
Vapor injection system	Continuous operation of the system	N/A	N/A	Record vapor consumed	Daily	Logbook	Every six months
	Optimum vapor/water to fuel rate	N/A	N/A	CMS Minimum established on performance test	Continuous	Logbook	Every six months

**a) New Source Performance Standards for Stationary Gas Turbines**

- i) Units EU-CT1 and EU-CT2 are subjected to the Standards of Performance for Stationary Gas Turbines established under 40 CFR Part 60, Subpart GG.
- ii) In case of conflict, EcoEléctrica shall comply with the most restrictive emission limit since the combustion turbines EU-CT1 and EU-CT2 are regulated by PSD and construction permit PFE-03-31-0696-0044-I-II-C and emissions discharges to the heat recovery steam generating (HRSG) units that are subjected to the Standards of Performance for Steam Generating Units for Electric Utilities under 40 CFR Part 60, Subpart Da.

**b) Opacity Limit**

- i.) Opacity emissions shall not exceed 20% (6-minutes average), except for one period of not more than four minutes in any consecutive 30 minutes interval when the opacity shall not exceed 60%. [Rule 403(A) of the RCAP]
- ii.) Prior to the date of startup and thereafter, EcoEléctrica shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) to measure and record stack opacity levels in each of the combustion turbine/HRSG exhaust stacks. The system shall meet all applicable EPA monitoring performance (including but not limited to 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 1).

**c) Sulfur Content Limit**

- i) The No. 2 fuel oil burned at the combustion turbines shall not contain more than 0.04% sulfur by weight.
- ii) Any fuel (LNG o LPG) burned at the combustion turbines shall not contain more than 0.8% sulfur by weight. [40 CFR §60.333]
- iii) EcoEléctrica shall sample the fuel being fired in the two Westinghouse 501F combustion turbines on each occasion that the fuel is received at the site for transfer to the storage tanks at the facility from any other source. The fuel sampling shall include but not be limited to determining the fuel's sulfur content (% by weight). EcoEléctrica shall also comply with the fuel sampling requirements under the Standards of Performance for Stationary Gas Turbines established in 40 CFR Part 60, Subpart GG.
- iv) Compliance with the sulfur content standard shall be determined using ASTM D 2880-71 method for liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82 or D 3246-81 methods for gaseous fuels as established in 40 CFR §60.335(d).
- v) EcoEléctrica, a service contractor retained by EcoEléctrica, the fuel vendor or any other qualified agency, may perform the sulfur content analysis. [40 CFR §60.335(e)]

**d) Nitrogen content limit**

- i) The No. 2 fuel oil burned at the combustion turbines shall not contain more than 0.10% nitrogen by weight.
- ii) EcoEléctrica shall sample the fuel being fired in the two Westinghouse 501F combustion turbines on each occasion that the fuel is received at the site for transfer to the storage tanks at the facility from any other source. The fuel sampling shall include but not be limited to determining the fuel's nitrogen content (% by weight). EcoEléctrica shall also comply with the fuel sampling requirements under the Standards of Performance for Stationary Gas Turbines established in 40 CFR Part 60, Subpart GG.
- iii) EcoEléctrica, a service contractor retained by EcoEléctrica, the fuel vendor or any other qualified agency, may perform the nitrogen content analysis. [40 CFR §60.335(e)]
- iv) Compliance with the nitrogen content standard shall be determined using analytical methods and procedures that are accurate to within 5% and are approved by the Administrator to determine the nitrogen content of the fuel being fired. [40 CFR §60.335(a), PFE-03-31-0696-0044-I-II-C]

**e) NO<sub>x</sub> Emission Limit at Each Heat Recovery Steam Generator (HRSG) Stack for Each Combustion Turbine**

- i) The NO<sub>x</sub> emissions calculated as NO<sub>2</sub> (3 hour rolling average), at or above minimum load shall not exceed:
  - a. 60 pounds per hour (lbs/hr) when firing natural gas or distillate oil.
  - b. 73 lbs/hr when firing LPG.

- ii) As established in 40 CFR §60.332, EcoEléctrica shall not cause to be discharged to the atmosphere any gases which contain nitrogen oxides in excess of:

STD = 0.0075 (14.4) /Y + F where:

STD = allowable NO<sub>x</sub> emissions (percent by volume at 15% oxygen and on a dry basis).

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt-hour.

F = NO<sub>x</sub> emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of 40 CFR §60.332.

- iii) EcoEléctrica shall use analytical methods and procedures that are accurate to within 5% and approved by EPA to determine the nitrogen content of the fuel being fired and calculate the nitrogen oxides emissions. [40 CFR §60.335(a)]

- iv) EcoEléctrica shall use as reference methods and procedures the test methods in Appendix A of 40 CFR Part 60, except as provided for in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of §60.335.

- v) EcoEléctrica shall determine compliance with the nitrogen oxides standards in §60.332 as follows:

- a. The nitrogen oxides (NO<sub>x</sub>) emission rate shall be computed for each run using the following equation:

$$\text{NO}_X = (\text{NO}_{XO}) (P_r/P_0)^{0.5} e^{19(H_o-0.00633)} (288^\circ\text{K}/T_a)^{1.53} \text{ where:}$$

NO<sub>x</sub> = NO<sub>x</sub> emission rate at 15% O<sub>2</sub> and ISO standard conditions, volume percent

$NO_{XO}$	=	observed NOx concentration, ppm per volume at 15% O <sub>2</sub>
$P_r$	=	reference combustor inlet absolute pressure at 101.3 kPa ambient pressure, mm Hg.
$P_0$	=	observed combustor inlet absolute pressure at test, mm Hg
$H_0$	=	observed humidity of ambient air, g H <sub>2</sub> O/ g air
$e$	=	transcendental constant, 2.178
$T_a$	=	ambient temperature, °K

- vi) The continuous monitoring system required by §60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with §60.332 at 30, 50, 75 and 100% of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer. [40 CFR §60.335(c)(2)] In EcoEléctrica's case, the tests were realized at 50% (minimum load), 75%, and 100% of the peak load and at the maximum load with the duct burners on according to the October 1, 1996 PSD permit specifications.
- vii) Method 20 shall be used to determine the nitrogen oxides and oxygen. The NOx emissions shall be determined at 30, 50, 75 and 100% of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. [40 CFR §60.335(c)(3)] In EcoEléctrica's case, the tests were realized using Method 7E according to the October 1, 1996 PSD permit specifications.

**f) NOx Concentration Limit at Each Heat Recovery Steam Generator (HRSG) Stack for Each Combustion Turbine**

- i) The concentration of NOx (3-hour rolling average) in the exhaust gas at or above minimum load shall not exceed:
  - a. 7 ppmvd corrected to 15% oxygen when firing natural gas.
  - b. 9 ppmvd corrected to 15% oxygen when firing LPG or no. 2 fuel oil.
- ii) Prior to the date of startup and thereafter, EcoEléctrica shall calibrate, maintain, and operate the continuous emission monitoring system (CEM) installed to measure and record stack gas NOx (as measured as NO<sub>2</sub>) concentrations in each of the combustion turbine/HRSG exhaust stacks. The system shall meet all applicable EPA monitoring performance (including but

not limited to 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specifications 2, and Appendix F).

**g) SO<sub>2</sub> Emission Limit at Each Heat Recovery Steam Generator (HRSG) Stack for Each Combustion Turbine**

- i) The SO<sub>2</sub> emissions (3 hour rolling average) at or above minimum load shall not exceed 70.5 lbs/hr when firing distillate oil.
- ii) EcoEléctrica shall not cause the discharge into the atmosphere any gases with contain sulfur dioxide in excess of 0.015% per volume at 15% oxygen and on a dry basis or shall not burn any fuel, which contains sulfur in excess of 0.8% by weight. [40 CFR §60.333] In addition, the sulfur content in No. 2 oil shall not exceed 0.04% by weight. [PFE-03-31-0696-0044-I-II-]
- iii) Compliance with the SO<sub>2</sub> emission limit shall be determined by calculation methods based upon the distillate oil's sulfur content and the distillate oil's flow to the combustion turbine.

**h) CO Emission Limit at Each Heat Recovery Steam Generator (HRSG) Stack for Each Combustion Turbine**

- i) The carbon monoxide emissions (3 hour rolling average) while firing any fuel at or above minimum load shall not exceed 244 lbs/hr.

**i) CO Concentration Limit at Each Heat Recovery Steam Generator (HRSG) Stack for Each Combustion Turbine**

- i) The concentration of CO (3 hour rolling average) in the exhaust gas when firing any fuel corrected to 15% oxygen, shall not exceed:
  - a. 33 ppmvd at 75% load and at maximum load for the combustion turbine.
  - b. 100 ppmvd at combustion turbine minimum load.
- ii) Prior to the date of startup and thereafter, EcoEléctrica shall calibrate, maintain, and operate the CEM installed to measure and record stack gas carbon monoxide concentrations in each of the combustion turbine/HRSG exhaust stacks. The system shall meet all applicable EPA monitoring performance specifications (including but not limited to 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specifications 4, and Appendix F).



**j) PM/ PM-10 Emission Limit at Each Heat Recovery Steam Generator (HRSG) Stack for Each Combustion Turbine**

- i) The PM/PM-10 emissions (3 hour rolling average) at or above minimum load shall not exceed:
  - a. 12 pounds per hour (lbs/hr) when firing natural gas or LPG.
  - b. 59 lbs/hr when firing distillate fuel oil.
- ii) The PM/PM-10 emissions (3 hour rolling average) at or above minimum load shall not exceed:
  - a. 0.0053 lbs/MMBtu (HHV) when firing natural gas or LPG.
  - b. 0.0390 lbs/MMBtu (HHV) when firing distillate fuel oil.

**k) VOC Emission Limit at Each Heat Recovery Steam Generator (HRSG) Stack for Each Combustion Turbine**

- i) The volatile organic compounds (VOC)(1 hour average measured as methane):
  - a. The VOC emissions for any fuel at or above minimum load shall not exceed 13.8 lbs/hr.
  - b. The concentration of VOC in the exhaust gas for any fuel, corrected to 15% oxygen, shall not exceed:
    - (i) 5 ppmvd at 75% and at maximum load.
    - (ii) 8 ppmvd at minimum load.

**l) Ammonia (NH<sub>3</sub>) Emission Limit at Each Heat Recovery Steam Generator (HRSG) Stack for Each Combustion Turbine**

- i.) The concentration of NH<sub>3</sub> in the exhaust gas shall not exceed 10 ppmdv, corrected to 15% oxygen.
- ii.) Ammonia Slip limit shall be met by maintaining the optimum ammonia flow rate at various operating loads. The optimum ammonia flow rate to meet the ammonia slip limit shall be determined during the performance test and shall become a condition of this permit.<sup>2</sup>

---

<sup>2</sup>EcoEléctrica shall negotiate with EPA the alternatives to comply with this requirement (condition 10 of Section XI of the PSD permit of October 1, 1998) and revise the construction permit PFE-03-31-0696-0044-I-II-C and this Title V permit with a copy of the written final determination from EPA.

**m) Continuous Opacity Monitoring Systems (COMS), Continuous Emissions Monitoring Systems (CEMS) and Continuous Monitoring Systems (CMS)**

- i) Prior to the date of startup and thereafter, EcoEléctrica shall calibrate, maintain, and operate the following continuous monitoring systems installed in each of the combustion turbine/HRSG exhaust stack:
  - a. A continuous opacity monitoring system (COMS) to measure and record stack opacity levels in each of the combustion turbine/HRSG exhaust stack. The system shall meet all applicable EPA monitoring performance (including but not limited to 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 1).
  - b. A continuous emission monitoring system (CEM) to measure and record stack gas NO<sub>x</sub> (as measured as NO<sub>2</sub>) concentrations in each of the combustion turbine/HRSG exhaust stack. The system shall meet all applicable EPA monitoring performance (including but not limited to 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specifications 2, and Appendix F).
  - c. A CEMS to measure and record stack gas oxygen concentrations in the stack. The system shall meet all applicable EPA monitoring performance specifications (including but not limited to 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specifications 3, and Appendix F).
  - d. A CEMS to measure and record stack gas carbon monoxide concentrations in each of the combustion turbine/HRSG exhaust stack. The system shall meet all applicable EPA monitoring performance (including but not limited to 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specifications 4, and Appendix F).
  - e. Continuous monitoring systems to measure and record each combustion turbine's operating temperature, stack gas temperatures, fuel flows, and steam/water to fuel ratio. Upon request of EQB or EPA, EcoEléctrica shall conduct a performance evaluation of the monitors.
- ii) EcoEléctrica realized the performance evaluations for the COMS, CEMS and continuous monitoring systems during the initial performance tests. See Appendix IV.
- iii) The monitoring systems must meet all the requirements of the applicable performance specification test in order for the monitors to be certified.

**n) Fuel type limitation for Each Combustion Turbine**

- i) Each Westinghouse 501F combustion turbine shall be primarily firing natural gas or LPG. No. 2 fuel oil (distillate oil) will only be fired as a backup fuel. Any combustion turbine shall not fire multiple fuels except during the fuel switching operation.
- ii) EcoEléctrica shall install and operate a continuous monitoring system to monitor and record the fuel consumption of the turbines. This system shall be accurate to within  $\pm 5\%$  and shall be approved by EPA. [40 CFR §60.334(a)]

**o) Fuel consumption limit for Each Combustion Turbine**

- i) Each Westinghouse 501F combustion turbine shall be limited to a maximum fuel consumption rate (3 hour average) of 12,500 gallons per hour of distillate fuel (based on 138,750 British Thermal Units HHV per gallon).
- ii) Each Westinghouse 501F combustion turbine shall continuously operate in accordance with its specified design combustion parameters.

**p) Combined distillate fuel oil consumption limit for Each Combustion Turbine**

- i) The combustion turbines combined consumption of distillate fuel oil shall not exceed 54,000,000 gallons for any 365 day rolling period.

**q) Heat Input Rate limit for Each Combustion Turbine**

- i) Each Westinghouse 501F combustion turbine shall be limited to a maximum heat input of 1911 million British Thermal Units HHV per hour (MMBtu/hr) of natural gas or 1801 MMBtu/hr HHV of LPG.

**r) Load limit for Each Combustion Turbine**

- i) Except for startup, shutdown, and fuel switching or transfer, each Westinghouse 501F combustion turbine unit shall only operate above Minimum Load.
- ii) Minimum Load shall be defined as the operating temperature of the combustions turbines that maintains the VOC emissions concentrations at or below the following concentration limits (1 hour average measured as methane) at the exhaust gases, corrected to 15% oxygen:
  - a. 1.5 parts-per-million by volume (ppmdv) on a dry basis firing natural gas,
  - b. 2.5 ppmdv when firing LPG, and 6.0 ppmdv firing distillate oil at maximum load.

- c. 8 ppm<sub>dv</sub> for any fuel at minimum load.
  - iii) Minimum Load shall not be set less than 50% of maximum load. For this permit, the maximum load is defined as 100% of the manufacturer's design capacity of the gas turbine for given inlet air conditions and fuel. Based on initial performance testing, the combustion turbines shall not operate below the following minimum loads: 50% of maximum load when firing LNG (EU-CT1 and EU-CT2), 50% of maximum load when firing LPG (EU-CT1), 55% of maximum load when firing LPG (EU-CT2), and 50% of maximum load when firing distillate fuel oil (EU-CT1 and EU-CT2), excluding startup, shutdown, fuel switching or transfer.
- s) Startup, shutdown and fuel switching or transfer duration limit for Each Combustion Turbine**
- i) Startup is defined as the period beginning with fuel input to the combustion turbines and ending when required minimum load has been attained. The duration of startup shall not exceed one hour for any given combustion turbine startup.
  - ii) Shutdown is defined as the period beginning with load decreasing from the required minimum load and ending with cessation of fuel input to the combustion turbine. The duration of shutdown shall not exceed one hour for any given combustion turbine shutdown.
  - iii) At all times, except during startup, shutdown, and fuel switching, EcoEléctrica shall operate Westinghouse 501F combustion turbines at or above minimum load. Combustion turbines shall not use bypass stacks to vent exhaust gases.
  - iv) Fuel switching or transfer for each Westinghouse 501F combustion turbine is defined as the period of time beginning with the load decreasing from the Minimum Load level and ending when the fuel switching is complete and the load has increased to the Minimum Load level. The duration of the fuel switching or transfer shall not exceed one consecutive hour for any given combustion turbine fuel transfer.
  - v) At all times, including periods of startup, shutdown and fuel transfer, EcoEléctrica shall, to the extent practicable, maintain and operate the two Westinghouse 501F combustion turbines including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to EPA and/or EQB which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the plant.

**t) Continuous Operation of the Selective Catalytic Reduction System (SCR)**

- i) At each Westinghouse 501F combustion turbine, EcoEléctrica shall continuously operate and maintain a Selective Catalytic Reduction System (SCR) in accordance with the manufacturer's design specifications. Each SCR shall continuously use a proven catalyst.
- ii) EcoEléctrica shall install and operate a meter for each SCR system of each turbine to measure and record the ammonia flows. These meters shall be calibrated at least every six months in accordance with the manufacturer's specifications.
- iii) Each SCR shall be operated in accordance with the manufacturer's specifications at any time when the combustion turbines are operating.
- iv) EcoEléctrica shall comply with the monitoring equipment adjustments and calibration requirements as included in Appendix V of this permit.

**u) Steam/Water Injection System**

- i) EcoEléctrica shall operate a steam/water injection system at each combustion turbine.
- ii) The optimum steam/water to fuel ratio for each unit was established during the performance test. The values are included in Appendix III.
- iii) EcoEléctrica shall install and operate a continuous monitoring system to monitor the steam/water to fuel ratio being fired in each turbine. This system shall be accurate to within  $\pm 5\%$  and shall be approved by EPA. [40 CFR §60.334(a)]
- iv) The continuous monitoring devices shall be used to determine the steam/water to fuel ratio necessary to comply with §60.332 at 30, 50, 75, and 100% of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and the peak load. All loads shall be corrected to ISO conditions using appropriate equations supplied by the manufacturer.

**v) Performance Testing Requirements for Each Combustion Turbine**

- i) EcoEléctrica conducted performance tests for NO<sub>x</sub>, PM, PM<sub>10</sub>, CO, VOCs and opacity at the HRSG stacks (See Appendix IV).
- ii) EcoEléctrica may request EPA and EQB in writing for a determination whether or not the VOCs performance tests shall continue to be conducted annually.

- iii) Additional performance tests or test runs may be required at the discretion of the EPA or EQB for any or all of the above pollutants. If additional tests are required:
- a. Three test runs shall be conducted for maximum, 75%, minimum and other intermittent load conditions (i.e., at four load conditions) and compliance for each operating mode shall be based on average emission rate of the three runs. Duct burners shall be firing during the tests at maximum load.
  - b. At least 60 days prior to actual testing, EcoEléctrica shall submit to the EPA and EQB a Quality Assurance Project Plan detailing methods and procedures to be used during the performance stack testing. A Quality Assurance Project Plan that does not have EPA and EQB approval may be grounds to invalidate any test and require a re-test.
  - c. For performance test purposes, sampling ports, platforms and access shall be provided by EcoEléctrica on each of the combustion turbine units in accordance with 40 CFR Part 60.8(e).
  - d. Operations during periods of startup, shutdown, malfunction and fuel switching or transfer shall not constitute representative conditions for the purpose of a performance test.
  - e. EcoEléctrica shall use the following test methods, or a test method which would be applicable at the time of the test and detailed in a test protocol approved by EPA and EQB:
    1. Performance tests to determine the stack gas velocity, sample area, volumetric flow rate, molecular composition, excess air of flue gases, and moisture content of flue gas shall be conducted using 40 CFR Part 60, Appendix A, Method 1, 2, 3, and 4.
    2. Performance tests for the emissions of NO<sub>x</sub> shall be conducted using 40 CFR Part 60, Appendix A, Method 7E.
    3. Performance tests for the emissions of PM shall be conducted using 40 CFR Part 60, Appendix A, Method 5.
    4. Performance tests for the emissions of PM<sub>10</sub> shall be conducted using 40 CFR Part 51, Appendix M, Method 201 (exhaust gas recycle) or Method 201A (constant flow rate), and Method 202.
    5. Performance tests for the emissions of CO shall be conducted using 40 CFR Part 60, Appendix A, Method 10.

6. Performance tests for the emissions of VOCs shall be conducted using 40 CFR Part 60, Appendix A, Method 18 and Method 25A. Method 18 shall be used to determine the non-VOC components of the emission stream. Performance tests for VOCs shall be conducted annually for at least three years following the start of operations at EcoEléctrica. After three years, EcoEléctrica may request EPA and EQB in writing for a determination whether or not these tests shall continue to be conducted annually as required by this condition.
7. Performance tests for the visual determination of the opacity of emissions from the stack shall be conducted using 40 CFR Part 60, Appendix A, Method 9 and the procedures stated in 40 CFR Part 60.11.
  - iv) Test results indicating that emissions are below the limits of detection shall be deemed to be in compliance.

**2. EU-GEN – Auxiliary Diesel Generator**

Condition	Parameter	Value	Units	Test Method	Frequency	Record-Keeping	Reporting Frequency
Maximum design capacity	Capacity	1280	kW	Record	Keep record during equipment life	Logbook	Non applicable
Opacity Limit	Opacity	20	Percent	Method 9	Annually	Record of opacity results	Sixty days after test
Sulfur content limit for diesel	Sulfur content	0.15	Percent by weight	Supplier fuel analysis	With every receipt	Logbook of analysis results	Monthly
Nitrogen content limit for diesel	Nitrogen content	0.10	Percent by weight	Supplier fuel analysis	With every receipt	Logbook of analysis results	Every six months
NOx Emission Limit	NOx (1-hour average)	3.97	Pounds per hour for LNG	Method 7E	See Appendix IV	Stack test results	Sixty days after test
		33.7	Pounds per hour for diesel				

Condition	Parameter	Value	Units	Test Method	Frequency	Record-Keeping	Reporting Frequency
CO Emission Limit	CO (1-hour average)	7.93	Pounds per hour for LNG	Method 10	See Appendix IV	Stack test results	Sixty days after test
		2.78	Pounds per hour for diesel				
PM-10 Emission Limit	PM-10 (1-hour average)	0.40	Pounds per hour for LNG	Method 201 or 201(A) and Method 202	See Appendix IV	Stack test results	Sixty days after test
		0.67	Pounds per hour for diesel				
VOC Emission Limit	COV (1-hour average)	2.38	Pounds per hour for LNG	Method 18 and Method 25A	Annually See Appendix IV	Stack test results	Sixty days after test
		0.25	Pounds per hour for diesel				
Fuel consumption limit	LNG	11.25	MMBtu/hr (HHV)	Consumption	Daily	Logbook	Monthly
	Diesel	82.1	Gallons per hour based on 138,750 Btu HHV per gallon				
Hours of operation limit	Hours of operation	2,720	Total hours per any 365 rolling days period	Record operation hours	Daily	Logbook	Every six months
		720	Hours per any 365 rolling days period consuming diesel				
		1	Hour from the time any turbine reaches minimum load after startup or shutdown				



Condition	Parameter	Value	Units	Test Method	Frequency	Record-Keeping	Reporting Frequency
		12	Hours per any 365 rolling days period concurrently with the turbines				

**a) Maximum Design Capacity**

- i) The auxiliary diesel generator EU-GEN shall be designed with a maximum capacity of 1280 kW.

**b) Opacity Limit**

- i) Opacity emissions shall not exceed 20% (6-minutes average), except for one period of not more than four minutes in any consecutive 30 minutes interval when the opacity shall not exceed 60%. [Rule 403(A) of the RCAP]

**c) Distillate Oil Sulfur Content Limit**

- i) The Auxiliary Diesel Generator shall use distillate fuel oil, which contains no more than 0.15 % sulfur by weight.
- ii) EcoEléctrica shall sample the fuel being fired in the Auxiliary Diesel Generator on each occasion that the fuel is received at the site for transfer to the storage tanks at the facility from any other source. The fuel sampling shall include but not be limited to determining the fuel’s sulfur content (% by weight).
- iii) Compliance with the sulfur content standard shall be determined using ASTM D 2880-71 method for liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82 or D 3246-81 methods for gaseous fuels.
- iv) EcoEléctrica, a service contractor retained by EcoEléctrica, the fuel vendor or any other qualified agency, may perform the sulfur content analysis.

**d) Distillate Oil Nitrogen Content Limit**

- i) The Auxiliary Diesel Generator shall continuously use gaseous fuels. The Auxiliary Diesel Generator shall use distillate fuel oil, which contains no more than 0.10 % nitrogen by weight.

- ii) EcoEléctrica shall sample the fuel being fired in the Auxiliary Diesel Generator on each occasion that the fuel is received at the site for transfer to the storage tanks at the facility from any other source. The fuel sampling shall include but not be limited to determining the fuel's nitrogen content (% by weight).
- iii) Compliance with the nitrogen content standard shall be determined using analytical methods and procedures that are accurate to within 5% and are approved by EPA to determine the nitrogen content of the fuel being fired.

**e) Oxides of Nitrogen (NOx) Emission Limits**

- i) The NOx emissions (one hour average) shall not exceed:
  - a. 3.97 lbs/hr when firing natural gas.
  - b. 33.7 lbs/hr when firing distillate fuel oil.

**f) Carbon Monoxide (CO) Emission Limits**

- i) The CO emissions (one hour average) shall not exceed:
  - a. 7.93 lbs/hr when firing natural gas.
  - b. 2.78 lbs/hr when firing distillate fuel oil.

**g) Particulate Matter <10 microns (PM-10) Emission Limits**

- i) The PM-10 emissions (one hour average) shall not exceed:
  - a. 0.40 lbs/hr when firing natural gas.
  - b. 0.67 lbs/ hr when firing distillate fuel oil.

**h) Volatile Organic Compounds (VOC) Emission Limits**

- i) The VOC emissions (one hour average) shall not exceed:
  - a. 2.38 lbs/hr when firing natural gas.
  - b. 0.25 lbs/hr when firing distillate fuel oil.

**i) Fuel Consumption Limit**

- i) The Auxiliary Diesel Generator is limited to a maximum fuel consumption rate of 82.1 gallons per hour of distillate fuel oil (based on 138,750 Btu HHV per gallon) or 11.25 MMBtu/hr (HHV) of natural gas.

- ii) The emission unit shall be provided with a fuel flow meter to verify fuel consumption. This flow meter shall be installed and ready to be operated at the permit approval date for this source. The flow meter shall be calibrated every six months in accordance with the manufacturer's specifications.

**j) Hours of Operation Limit**

- i) The Auxiliary Diesel Generator shall operate no more than:
  - a. 2,720 hours in any 365-day rolling period,
  - b. 720 hours in any 365-day rolling period when utilizing distillate fuel oil, and
  - c. One hour from the time any combustion turbine reaches minimum load after startup or shutdown.
- ii) The Auxiliary Diesel Generator shall not operate concurrently with any two combustion turbine except for 12 hour period per 365-day rolling average during combustion turbine startup.

**k) Performance Testing Requirements the Auxiliary Diesel Generator**

- i) EcoEléctrica conducted performance tests for NO<sub>x</sub>, PM, PM<sub>10</sub>, CO, VOCs and opacity at the Auxiliary Diesel Generator stack (See Appendix IV).
- ii) EcoEléctrica may request EPA and EQB in writing for a determination whether or not the VOCs performance tests shall continue to be conducted annually.
- iii) Additional performance tests or test runs may be required at the discretion of the EPA or EQB for any or all of the above pollutants. If additional tests are required:
  - a. Three test runs shall be conducted for maximum load and compliance shall be based on the average emission rate of the three runs.
  - b. At least 60 days prior to actual testing, EcoEléctrica shall submit to the EPA and EQB a Quality Assurance Project Plan detailing methods and procedures to be used during the performance stack testing. A Quality Assurance Project Plan that does not have EPA and EQB approval may be grounds to invalidate any test and require a re-test.
  - c. For performance test purposes, EcoEléctrica shall provide sampling ports, platforms and access for the Auxiliary Diesel Generator.

- d. Operations during periods of startup, shutdown, malfunction and fuel switching or transfer shall not constitute representative conditions for the purpose of a performance test.
- e. EcoEléctrica shall use the following test methods, or a test method which would be applicable at the time of the test and detailed in a test protocol approved by EPA and EQB:
  - 1. Performance tests to determine the stack gas velocity, sample area, volumetric flow rate, molecular composition, excess air of flue gases, and moisture content of flue gas shall be conducted using 40 CFR Part 60, Appendix A, Method 1, 2, 3, and 4.
  - 2. Performance tests for the emissions of NO<sub>x</sub> shall be conducted using 40 CFR Part 60, Appendix A, Method 7E.
  - 3. Performance tests for the emissions of PM shall be conducted using 40 CFR Part 60, Appendix A, Method 5.
  - 4. Performance tests for the emissions of PM<sub>10</sub> shall be conducted using 40 CFR Part 51, Appendix M, Method 201 (exhaust gas recycle) or Method 201A (constant flow rate), and Method 202.
  - 5. Performance tests for the emissions of CO shall be conducted using 40 CFR Part 60, Appendix A, Method 10.
  - 6. Performance tests for the emissions of VOCs shall be conducted using 40 CFR Part 60, Appendix A, Method 18 and Method 25A. Method 18 shall be used to determine the non-VOC components of the emission stream.
  - 7. Performance tests for the visual determination of the opacity of emissions from the stack shall be conducted using 40 CFR Part 60, Appendix A, Method 9 and the procedures stated in 40 CFR Part 60.11.
- iv) Test results indicating that emissions are below the limits of detection shall be deemed to be in compliance.

### 3. EU-DB1 and EU-DB2 – Duct Burners

Condition	Parameter	Value	Units	Test Method	Frequency	Record-Keeping	Reporting Frequency
Load limit	Load	90	Percent	Record load	Continuous	Daily record	Every six months
Fuel type	LNG LPG	N/A	N/A	Record type of fuel burned	Daily	Logbook	Every six months
Consumption limit	Combined consumption	600	MMBtu/hr	Record consumption	CMS	Daily record	Monthly

#### a) Load Limit

- i) No duct burner shall be operated if the corresponding combustion turbine is operating at less than 90% of the maximum load.
- ii) Each duct burner shall always be operated in accordance with the manufacturer's specified combustion parameters.

#### b) Fuel Type

- i) The duct burners shall fire natural gas or LPG only.

#### c) Fuel Consumption Limit

- i) Each duct burner shall be limited to a maximum design heat input of 480 MMBtu/hr.
- ii) The combined consumption of natural gas and/or LPG in both duct burners shall not exceed 600 MMBtu/hr.
- iii) Prior to the date of startup and thereafter, EcoEléctrica shall install, calibrate, maintain, and operate continuous monitoring systems to measure and record each duct burner's fuel flows. Upon request of EPA or EQB, EcoEléctrica shall conduct a performance evaluation for the monitors.

#### d) Standards of Performance for Steam Generating Units for Electric Utility

- i) EcoEléctrica shall demonstrate compliance with the Standards of Performance for Steam Generating Units of Electric Utility of 40 CFR Part 60, Subpart Da for the Heat Recovery Steam Generating units that are part of units EU-DB1 and EU-DB2.
- ii) Units EU-DB1 and EU-DB2 are subject to Subpart Da unless and until Part 60 Subpart GG extends the Subpart GG applicability to electric utility steam

generators. Only the emissions resulting from the fuel combustion in units EU-DB1 and EU-DB2 are subjected to Subpart Da. [40 CFR §60.40a(b)]

- iii) In case of conflict, EcoEléctrica shall comply with the most restrictive emission limit since the combustion turbines EU-DB1 and EU-DB2 are regulated by PSD and construction permit PFE-03-31-0696-0044-I-II-C.
- iv) EcoEléctrica shall not cause the discharge into the atmosphere any gases which contain particulate matter in excess of 0.03 lb/MMBtu heat input derived from the combustion of gaseous fuel. [40 CFR §60.42a(a)(1)]
- v) EcoEléctrica shall not cause the discharge into the atmosphere any gases, which exhibit greater than 20% opacity (6-minute average), except for one 6-minute period per hour of not more than 27% opacity. [40 CFR §60.43a(b)]
- vi) EcoEléctrica shall not cause the discharge into the atmosphere any gases, which contain sulfur dioxide (40 CFR §60.43a) in excess of:
  - a. 0.80 lb/ MMBtu heat input and 10% of the potential combustion concentration (90% reduction), or
  - b. 100% of the potential combustion concentration (0% reduction) when emissions are less than 0.20 lb/MMBtu heat input.
- vii) Compliance with the emission limitation for sulfur dioxide and percent reduction requirements are both determined on a 30-day rolling average basis. [40 CFR §60.43a(g)]
- viii) EcoEléctrica shall not cause the discharge into the atmosphere any gases, which contain nitrogen oxides (expressed as NO<sub>2</sub>) in excess of 1.6 lbs per MW per hour of gross energy output based, based on a 30-day rolling average, except as provided under 40 CFR §60.46a(k)(a). [40 CFR §60.44a(d)(1)]
- ix) According to 40 CFR §60.46a(c), the particulate matter emission standard under 40 CFR §60.42a and the nitrogen oxides emission standards under 40 CFR §60.44a apply at all times except during periods of startup, shutdown, or malfunction<sup>3</sup>. The sulfur dioxide emission standards apply at all times except during periods of startup, or shutdown.

---

<sup>3</sup> According to 40 CFR §60.2, a malfunction is defined as any sudden, infrequent, and not reasonably preventable failure of the air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

#### 4. EU-TK1 –Distillate Oil Storage Tank

Condition	Parameter	Value	Units	Test Method	Frequency	Record-Keeping	Reporting Frequency
Dimensions and capacity	N/A	N/A	N/A	Record for the life of the tank	Once during life of the tank	Logbook	N/A

##### a) Dimensions and Capacity Limit

- i) The EU-TK1 tank is subjected to the Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) in 40 CFR Part 60, Subpart Kb.
- ii) The EU-TK1 unit shall use a fixed roof for the storage of distillate fuel oil.

#### 5. EU-LNG – Liquefied Natural Gas Storage Tank

Condition	Parameter	Value	Units	Test Method	Frequency	Record-Keeping	Reporting Frequency
Flare heat input CD-FL	LNG	6,500	MMBtu/hr	Record heat input rate	Daily	Logbook	Every six months
Flare Pilot Flame CD-FL	N/A	N/A	N/A	Thermocouple	Daily	Logbook	Every six months

##### a) Flare CD-FL Heat Input as control device for EU-LNG unit

- i) The flare CD-FL shall be designed with heat input rate of 6,500 MMBtu/hr of natural gas.
- ii) The flare CD-FL shall be used for non-routine purposes such as but not limited to the disposal of vented natural gas in emergency overpressure or fire safety, control system malfunction, emergency shutdown or normal depressurizations for maintenance work.
- iii) The flare CD-FL shall be designed for and operated to meet all applicable state and federal regulations.

##### b) Flare CD-FL Pilot Flame Presence

- i) The flare CD-FL shall be operated with a pilot flame present at all times.
- ii) The presence of a flare pilot flame in flare CD-FL shall be monitored using a thermocouple or any equivalent device to detect the presence of a flame.

## 6. EU-LPG – Liquefied Petroleum Gas Storage Tank

Condition	Parameter	Value	Units	Test Method	Frequency	Record-Keeping	Reporting Frequency
Flare CD-FL Heat Input	LPG	4,500	MMBtu/hr	Heat input rate record	Daily	Logbook	Every six months
Pilot Flame Flare CD-FL	N/A	N/A	N/A	Thermocouple	Daily	Logbook	Every six months

### a) Flare CD-FL Heat Input as control device for EU-LPG unit

- i) The flare CD-FL shall be designed with heat input rate of 4,500 MMBtu/hr of LPG.
- ii) The flare CD-FL shall be designed for and operated to meet all applicable state and federal regulations.

### b) Flare CD-FL Pilot Flame Presence

- i) The flare CD-FL shall be operated with a pilot flame present at all times.
- ii) The presence of a flare pilot flame in flare CD-FL shall be monitored using a thermocouple or any equivalent device to detect the presence of a flame.

## 7. EU-SWCT and EU-SWCTH – Cooling Towers

Condition	Parameter	Value	Units	Test Method	Frequency	Record-Keeping	Reporting Frequency
PM/PM-10 Emission limit	PM/PM-10	0.0015	% of circulating flow	Method 5 or Method approved by EPA	Daily	Record and calculations results	Every six months
	PM-10	59.8 (1-hour average)	Pounds per hour	Emission calculations			
Mist eliminators	Non applicable	Non applicable	Non applicable	Inspections	Annually	Inspection and maintenance record	Every six months



**a) PM/PM-10 Emission Limit**

- i) The PM/PM-10 emissions shall be limited to less than or equal to 0.0015% of the circulating flow using two stages of mist eliminators. Particulate matter < 10 microns (one hour average) shall not exceed 59.8 lbs/hr.
- ii) Compliance with the cooling tower PM/PM-10 emission limit shall be determined by multiplying the maximum cooling water circulation rate with cooling water's drift rate and total dissolved solids (TDS) concentration. The TDS shall be monitored continuously.
- iii) EcoEléctrica shall keep a daily record of the water TDS concentration, the maximum cooling water circulation rate, the cooling water drift's rate and the cooling tower emission calculation.
- iv) EcoEléctrica realized the performance test for PM/PM-10 at the cooling towers (See Appendix IV).
- v) Additional performance tests or test runs may be required at the discretion of the EPA or EQB for any or all of the above pollutants. If additional tests are required, EcoEléctrica shall use 40 CFR Part 60, Appendix A, Method 5 to confirm the specified drift rate of 0.0015% of the circulating sea water flow rate on the cooling towers. EcoEléctrica shall use other test method that applies at the time of the test if the proposed method is included in the Quality Assurance Project Plan approved by EPA and EQB.
- vi) Test results indicating that emissions are below the limits of detection shall be deemed to be in compliance.

**b) Mist Eliminators**

- i) EcoEléctrica shall install and shall continuously operate two stages of mist eliminators (CD-ME) in the seawater cooling tower.
- ii) The mist eliminators CD-ME shall be inspected every year for wear and tear and replaced pursuant to good operational practices.

**Section VI – Recordkeeping Requirements**

A. EcoEléctrica shall keep and update daily the following records:

- 1. hours of operations of each combustion turbine (EU-CT1 and EU-CT2) for each fuel,
- 2. gallons of No.2 fuel oil fired on an hourly basis at each combustion turbine (EU-CT1 and EU-CT2),

3. the sulfur content of all fuel oil burned,
4. the amount of steam (steam injection system) at each combustion turbine (EU-CT1 and EU-CT2) to control NOx emissions,
5. the amount of electrical output (MW) on an hourly basis from each combustion turbine (EU-CT1 and EU-CT2),
6. any adjustments and maintenance performed on each combustion turbine (EU-CT1 and EU-CT2),
7. any adjustments and maintenance performed on monitoring systems,
8. gallons of No.2 fuel oil consumed on an hourly basis and daily amount of LNG fired at the Auxiliary Diesel Generator EU-GEN. The record shall be kept in a 365 day rolling average.
9. sulfur and nitrogen content in the No. 2 fuel oil fired at the Auxiliary Diesel Generator EU-GEN. The record shall be kept in a 365 day rolling average.
10. hours of operation for the Auxiliary Diesel Generator EU-GEN,
11. hours of simultaneous operation for the Auxiliary Diesel Generator EU-GEN with the turbines EU-CT1 and EU-CT2,
12. the amount of fuel consumed in MMBtu HHV on an hourly basis at each duct burner (EU-DB1 and EU-DB2),
13. the amount of ammonia flow to each SCR (CD-SCR1 and CD-SCR2),
14. the periodic calibration of the ammonia flow meters,
15. the number of hours the flare CD-FL operated,
16. cooling towers (EU-SWCT and EU-SWCTH) emission calculations and total dissolved solids concentration,
17. inspections and maintenance performed on mist eliminators (CD-ME),
18. all calibrations performed,
19. amount of distillate fuel oil loaded to storage tank EU-TK1,
20. distillate fuel oil storage tank EU-TK1 dimensions and analysis stating the tank capacity,
21. hours of operation and amount of fuel consumed by the fire pumps included in Section IX of this permit,

22. any one-hour period during which the average steam/water to fuel ratio, falls below the optimum steam/water to fuel ratio established in Appendix III or except for startups, shutdowns, fuel change or fuel transfer, and turbine load change. This report shall include the average steam/water to fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the data of emissions obtained from the NOx monitoring systems.
- B. EcoEléctrica shall keep available at all times a copy of the Emergency Plan required in Rule 107 of the RCAP.
  - C. EcoEléctrica shall keep readily accessible records of fire fighting activities related to research or training.
  - D. EcoEléctrica must keep records of refrigerant purchased and added to appliances normally containing 50 or more pounds of refrigerant. [40 CFR §82.166]
  - E. EcoEléctrica shall keep at the facility a document showing the design specifications of the Auxiliary Diesel Generator EU-GEN.
  - F. EcoEléctrica shall keep readily accessible records showing the dimension of the storage tank EU-TK1 and an analysis showing the capacity of the storage tank pursuant to 40 CFR §60.116b. The required record shall be kept for the life of the source.
  - G. All monitoring records, fuel sampling test results and logs must be maintained for a period of five years after the date of record, and made available upon request. All rolling averages shall be computed on a daily basis.

## **Section VII – Reporting Requirements**

- A. Compliance Certification: According to Rule 602(c)(2)(ix)(C) of the RCAP, EcoEléctrica shall submit annually a compliance certification. This certification shall be submitted to both the Board and the EPA<sup>4</sup> no later than 90 days after each permit anniversary. The compliance certification shall include, but is not limited to, the following information:
  1. identification of the applicable requirement that is the basis of the certification;
  2. the method used to determine the compliance status of the source;
  3. the compliance status;

---

<sup>4</sup> The certification to the EQB shall be mailed to: Director, Air Quality Program, P.O. Box 11488, Santurce, PR 00910. The certification to the EPA shall be mailed to: Chief, Permitting Section, Air Program Branch, EPA Region II, 290 Broadway, New York, NY, 10007.

4. whether compliance is continuous or intermittent:
  5. such other facts as the EQB may require; and
  6. for purposes of paragraphs 2 and 4 of this section, EcoEléctrica shall identify the methods or other means used to determine the compliance status with each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. If necessary, EcoEléctrica shall also identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information. For purposes of paragraph 3 of this section, EcoEléctrica shall identify each deviation and take it into account in the compliance certification.
- B. According to §60.49a of 40 CFR, EcoEléctrica shall submit to EQB and EPA the following records for units EU-DB1 and EU-DB2:
1. For sulfur dioxide, nitrogen oxides, and particulate matter emissions, the performance test data from the initial performance test and from the performance evaluation of the continuous monitors. [40 CFR §60.49a(a)]. The 40 CFR §60.47a exempts EcoEléctrica of operating the CMS to monitor the emissions of:
    - (a) SO<sub>2</sub> in duct burners where natural gas is the only fuel combusted. [40 CFR §60.47a(b)]
    - (b) NO<sub>x</sub> in the duct burners because is is subject to NO<sub>x</sub> standards of 40 CFR §60.44a(d)(1). [40 CFR §60.47a(o)]
  2. If the minimum quantity of emission data as required by 40 CFR §60.47a is not obtained for any 30 successive boiler operating days, the information from paragraphs (1) to (5) of 40 CFR §60.49a(c) as applicable and obtained under the requirements of §60.46a(h) of 40 CFR shall be reported to EQB and EPA for that 30-day period. In EcoEléctrica's case, the boilers are referred to the duct burners.
  3. For any periods for which opacity, sulfur dioxide or nitrogen oxides emissions data are not available, EcoEléctrica shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability. Operations of the control systems of an affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability. [40 CFR §60.49a(f)]
  4. EcoEléctrica shall submit a signed statement as applicable indicating the information specified in paragraphs from (1) to (4) of 40 CFR §60.49a(g).

5. EcoEléctrica shall submit the written reports required under Part 60, Subparts A and Da of 40 CFR to EQB and EPA semiannually for each six-month period. All semiannual reports shall be post-marked by the 30<sup>th</sup> day following the end of each six-month period. [40 CFR§60.49a(i)]
  6. EcoEléctrica may submit electronic quarterly reports for SO<sub>0</sub> and/or NO<sub>x</sub> and/or opacity in lieu of submitting the written reports required under paragraphs (b) and (h) of §60.49a of 40 CFR. The format of each quarterly electronic report shall be coordinated with EQB. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of Part 60 Subpart Da were achieved during the reporting period. Before submitting reports in the electronic format, EcoEléctrica shall coordinate with EQB to obtain our agreement to submit reports in this alternative format. [40 CFR§60.49a(j)]
- C. Emissions Calculations. Only for fee calculation purposes, EcoEléctrica shall submit, on the first day of April of each year, the actual or permissible emissions calculations for the previous calendar 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. EcoEléctrica must make the applicable payment for the emissions calculations for the previous year on or before June 30 of each year. The emissions calculations must include, but not limited to, PM/PM10, NO<sub>x</sub>, VOC, NH<sub>3</sub>, CO, SO<sub>x</sub>, formaldehyde, lead and sulfuric acid emissions.
- D. As part of the annual compliance certification required under 40 CFR Part 70, EcoEléctrica shall include the requirements of Subpart G of 40 CFR Part 68, including the recordkeeping and the Risk Management Plan, and a certification supporting the adequate implementation of the Plan according to 107(D) of the RCAP. If EcoEléctrica is no longer subject to part 68 Subpart G, EcoEléctrica shall submit a revised registration to EPA and EQB within six months indicating that the stationary source is no longer covered by this subpart. EcoEléctrica shall maintain all records supporting the implementation of this part for five years unless otherwise provided 40 CFR Part 68, Subpart G. EcoEléctrica shall review and update de RMP as specified in 40 CFR §68.150 as follows:
1. Within five years of its initial submission or most recent update required by paragraphs (b)(2) through (b)(7) of §68.190. [40 CFR Part 68, Subpart G]
  2. No later than three years after a newly regulated substance is first listed by EPA.
  3. No later than the date on which a new regulated substance is first present in an already covered process above a threshold quantity.
  4. No later than the date on which a regulated substance is first present and above a threshold quantity in a new process.

5. Within six months of a change that requires a revised Process Hazard Analysis or hazard review.
  6. Within six months of a change that requires a revised offsite consequence analysis as provided in 40 CFR §68.36.
  7. Within six months of a change that alters the Program level that applied to any covered (authorized) process.
- E. As established under Rule 603(a)(5)(i) of the RCAP, EcoEléctrica shall submit reports every 6 months of all required recordkeeping and monitoring required in Section VII of this permit, part A and B. All required reports must be certified by a responsible official as established under Rule 602(c)(3) of the RCAP.
- F. Fuel Consumption Monthly Report: For units EU-CT1, EU-CT2, EU-DB1, EU-DB2 and EU-GEN subjected to Rule 410 of the RCAP, EcoEléctrica shall submit a monthly report indicating on a daily basis the sulfur 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 EQB to the attention of the Chief of the Validation and Data Management Division during the first 15 days of the following month of the month for which the report is representative. EcoEléctrica shall submit annually with the annual compliance certification, a copy of the reports for the year showing the sulfur content in percent by weight and fuel consumption.
- G. EcoEléctrica shall submit a written report of all excess emissions to EQB and EPA for every calendar quarter. All quarterly reports shall be postmarked by the 30<sup>th</sup> day following the end of each quarter and shall include the information specified below:
1. The magnitude of excess emissions computed in accordance with 40 CFR Part 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.
  2. Specific identification of each period of excess emissions that occurs during startups, shutdowns, malfunctions, and fuel switching or transfers for each turbine unit. The nature and cause of any malfunction (if known) and the corrective action taken or preventive measures adopted shall also be reported.
  3. 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.
  4. When no excess emissions have occurred or the monitoring systems have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

5. Results of quarterly monitor performance audits, as required in 40 CFR Part 60, Appendix F.
6. Excess emissions indicated by monitoring systems, except during startup, shutdown or fuel switching or transfer shall be considered violations of the applicable emission limits. However, EcoEléctrica may raise the applicable defenses in any fiscalization action in which excess emissions violations are alleged.
7. Excess emissions reports shall include, but not limited to, excess emissions in opacity, NO<sub>x</sub>, CO, and the following excesses:
  - a. Any one-hour period during which the average steam/water to fuel ratio, falls below the optimum steam/water to fuel ratio established in Appendix III or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowed in this permit. This report shall include, ambient conditions, gas turbine load, and nitrogen content of the fuel, the average fuel consumption, the average steam/water to fuel ratio and the results of the NO<sub>x</sub> monitoring equipment. [40 CFR 60.334(c)(1)]
  - b. Any daily period during which the sulfur content of the fuel being fired in the gas turbines EU-CT1 and EU-CT2 exceeds 0.8%. [40 CFR 60.334(c)(2)]
  - c. For units EU-DB1 and EU-DB2 and for purposes of the reports required under 40 CFR §60.7, periods of excess emissions are defined as all 6-minute periods during which the average opacity exceeds the applicable opacity standards under §60.42a(b) of 40 CFR. Opacity levels in excess of the applicable opacity standard and the date of such excesses are to be submitted to EPA and EQB each calendar quarter as required in §60.49a(h) of 40 CFR.
- H. Pursuant Rule 603(a)(5)(ii) of the RCAP, any deviation resulting from emergency or upset conditions (such as sudden failure or breakdown) as defined in Rule 603(e) of the RCAP shall be reported within two working days.
- I. Pursuant to Rule 603 (a)(5)(ii)(b) of the RCAP, a notification to EQB within 24 hours will be required if a deviation occurs that results in the release of emissions of hazardous air pollutants for more than an hour in excess of the applicable limit. EcoEléctrica shall notify EQB within 24 hours of the deviation for the discharge of any regulated air pollutant that continues for more than 2 hours in excess of the applicable limit. EcoEléctrica shall also submit to the Board, within 7 days of the deviation, a detailed written report, which includes probable causes, time and duration of the deviation, remedial action taken, and steps, which are being taken to prevent a reoccurrence. [This condition is enforceable only by the State]
- J. Pursuant to Rule 108(E) of the RCAP, in the case of a shutdown of air pollution control equipment for the necessary scheduled maintenance, the intent to

shutdown such equipment shall be reported to the Board at least three days prior to the planned shutdown. Such prior notice shall include, but is not limited to the following:

- (1) Identification of the specific source to be taken out of service with its location and permit number.
- (2) The expected length of time that the air pollution control equipment will be out of service.
- (3) The nature and quantity of emissions of air pollutants likely to be emitted during the shutdown period of the control equipment.
- (4) Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period.
- (5) The reasons why it will be impossible or impractical to shutdown the operating source during the maintenance period.

- K. Any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emission limit stated in this permit and actions taken on any unit must be reported by telephone within 24 hours to:

Manager, Air Quality Area  
Environmental Quality Board of Puerto Rico  
PO Box 11488  
Santurce, Puerto Rico 00910  
787-767-8025

- L. In addition, EPA and EQB shall be notified in writing within 15 days of any such failure. This notification shall include: a description of the malfunctioning equipment or abnormal operation; the date of the initial failure; the period of time over which emissions were increased due to the failure; the cause of the failure; the estimated resultant emissions in excess of those allowed under this permit; and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or any law or regulations, which such malfunction, may cause.

- M. EcoEléctrica may comply with the requirements of notifications established in Rule 603(a)(5)(ii) of the RCAP and the PSD permit if EcoEléctrica notifies any failure of the air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emission limit stated in the Title V permit. Such notifications shall be done by phone within 24 hours of the incident and submit to the Board a written report within seven (7) days. Both the oral and the written report shall include and comply with the requirements as established in Rule 603 of the RCAP and the PSD permit.



N. EcoEléctrica shall submit a written report to EPA and EQB of a Quality Assurance Project Plan for the certification of the combustion turbine’s monitoring systems not less than 90 days prior to the date of startup of each combustion turbine.

O. EcoEléctrica shall submit a written report to EPA and EQB of the results of all monitor performance specification evaluations conducted on the monitoring system(s) within 60 days of the completion of the tests.

P. EcoEléctrica shall submit one copy to EPA and two copies to EQB of all emission test reports within 60 days after performance of the emission test. [Rule 106(E) of the RCAP]

Q. All reports and Quality Assurance Project Plans required by this permit shall be submitted to:

Manager, Air Quality Area  
 Environmental Quality Boar of Puerto Rico  
 PO Box 11488  
 Santurce, Puerto Rico 00910

**Section VIII – Insignificant Emission Units**

EcoEléctrica provided the following list of insignificant activities for a better understanding of its operations and layout. Since there is no requirement to update this list, insignificant activities may have changed since this filing.

**Insignificant Emission Units and Base of Its Exemption.**

Emission Source Identification	Description (Base for exemption)
Two emergency diesel fire pumps	Appendix B 2 of the RCAP
Sulfuric acid tank	Rule (B) (12) (a) of the RCAP
Sodium hydroxide tank	Appendix B 3 ii (N) of the RCAP
Ethylene glycol tank	Appendix B 3 ii (N) of the RCAP
Office activities	Appendix B 3 ii (A) of the RCAP
Maintenance activities	Appendix B 3 ii (B) of the RCAP
Bathroom and locker room ventilation and maintenance	Appendix B 3 ii (C) of the RCAP
Quality control laboratory	Appendix B 3 ii (M) of the RCAP

<b>Emission Source Identification</b>	<b>Description (Base for exemption)</b>
Vehicle engines	Appendix B 3 iii of the RCAP
Diesel Auxiliary Generator diesel storage tank	Rule 206 (F) (3) of the RCAP
Fire pumps diesel storage tank	Rule 206 (F) (3) of the RCAP
Training activities	Appendix B 3 xvi of the RCAP
Safety devices	Appendix B 3 xix of the RCAP
Air compressors and pumps	Appendix B 3 xxiii of the RCAP
Equipment for steam cleaning or brushing dust off equipment	Appendix B 3 xxx of the RCAP
Non-routine clean out of tanks and equipment for the purposes of worker entry or in preparation for maintenance or decommissioning	Appendix B 3 xxvi of the RCAP
Safety valves	Appendix B 2 of the RCAP
Herbicide mixing and application activities not involving herbicide manufacturing	Appendix B 3 xxxvii of the RCAP

## Section IX – Permit Shield

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

### 1. Non-Applicable Requirements

<b>Non Applicable Requirements</b>		
<b>State</b>	<b>Federal</b>	<b>Reason</b>
Non applicable	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) (40 CFR Part 60 Subpart Kb)	See Section X, Part 2 of this Permit

## 2. Reasons for Non Applicability

Coding for Non Applicability	
Code	Reason
40 CFR Part 60 Subpart Kb	It is not applicable to (EU-LNG, EU-LPG) volatile organic liquids that emit only those compounds which the Administrator has determined do not contribute appreciably to the formation of ozone.

### Section X – Permit Approval

By virtue of the authority conferred upon the Environmental Quality Board by the Public Policy Environmental Act, Law No. 416, September 22, 2004, and after verifying the administrative record and compliance with the Uniform Administrative Procedure Act, Law No. 170, August 12, 1988, as amended, the Clean Air Act, the Public Policy Environmental Act and the Regulation for the Control of Atmospheric Pollution, the Environmental Quality Board approves this permit subject to all the terms and conditions herein established.

In San Juan, Puerto Rico, September 20, 2005.

### ENVIRONMENTAL QUALITY BOARD

/s/  
Flor L. del Valle López  
Vice President

/s/by Julio I. Rodríguez Colón  
Ángel O. Berríos Silvestre  
Associate Member

/s/  
Carlos W. López Freytes, Esq.  
President

## **APPENDIX**

## Appendix 1-Definitions and Abbreviations

### I. Definitions:

1. Law- Federal Law of Clean Air
  2. Regulation - Regulation for the Control of Atmospheric Pollution for the Environmental Quality Board.
  3. Responsible Officer - As defined in the Regulation for the Control of Atmospheric Pollution of the Environmental Quality Board.
  4. Title V - Title V of the Clean Air Act (42 U.S.C. 7661)
- 

### II. Abbreviations:

ASTM	American Standard Testing Methods
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
CMS	Continuous Monitoring System
CO	Carbon monoxide
COMS	Continuous Opacity Monitoring System
EPA	Environmental Protection Agency
EQB	Environmental Quality Board of Puerto Rico
HAP	Hazardous Air Pollutant
Hg	Mercury

HHV	High Heating Value
HRSG	Heat Recovery Steam Generator
H <sub>2</sub> SO <sub>4</sub>	Sulfuric Acid
ISO	International Standards Organization
°K	Kelvin degrees
kPa	Kilopascal
kW	Kilowatts
LNG	Liquefied natural gas
LPG	Liquified Petroleum Gas
MM	Millimeters
MMBtu	Million Btu
MW	Megawatts
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NH <sub>3</sub>	Ammonia
NO <sub>x</sub>	Oxides of nitrogen
NO <sub>2</sub>	Nitrogen dioxide
NSPS	New Source Performance Standards
O <sub>2</sub>	Oxygen
PM	Particulate matter
PM <sub>10</sub>	Particulate matter with particulate which diameter has an aerodynamic mass equal or less than 10 microns.

PPM	Parts per million
PPMDV	Pars per million in a volumetric dry basis
PREPA	Puerto Rico Electric Power Authority
PSD	Prevention of Significant Deterioration
RATA	Relative Accuracy Test Audits
RCAP	Regulations for the Control of Atmospheric Pollution of the Environmental Quality Board
RMP	Risk Management Plan
SCR	Selective Catalytic Reduction
SIC	Standard Industrial Classification
SO <sub>x</sub>	Sulfur oxides
SO <sub>2</sub>	Sulfur dioxide
TDS	Total Dissolved Solids
VOC	Volatile Organic Compounds

## Appendix II – Control Devices Descriptions

<b>Control Device</b>	<b>Type</b>	<b>Efficiency</b>	<b>Manufacturer</b>	<b>Model</b>
CD-SCR1	Selective Catalytic Reduction	For NOx 75 % for LNG 76% for LPG 77% for Diesel	Mitsubishi	M59-0800
CD-SCR2	Selective Catalytic Reduction	For NOx 75 % for LNG 76% for LPG 77% for Diesel	Mitsubishi	M59-0800
CD-FL	Flare	For LPG and LNG 95%	Flare Industries	245 Pilots 320 Automatic Flame
CD-ME	Mist eliminators	0.0015% Drift rate	Hamon	H33D PVC Packs



### Appendix III – Steam/water Injection System optimum steam/water to fuel ratio

Conditions	Parameter	Minimum Values	Units	Test Methods	Recordkeeping	Reporting Frequency
Optimum steam/water to fuel ratio	For LNG	At load: 50 % - 0.57-0.62 70 % - 0.65-0.69 100%-0.75-0.80	Fraction	CMS Results	Daily update	Quarterly excess emission report on any one-hour period during which the average steam/water to fuel ratio, falls below the optimum established steam/water to fuel ratio.
	For LPG	At load: 50 % - 0.33-0.58 75 % - 1.05-1.15 100% - 1.47-1.57				
	For distillate fuel oil	At load: 50 % - 1.16 - 1.29 75 % - 1.23 - 1.32 100% - 1.43 – 1.50				

**Appendix IV – EcoEléctrica, L.P. Performance Tests**

<b>Equipment</b>	<b>Objective</b>	<b>Test Method</b>	<b>Date</b>
<b>Stack CT1 (LPG)</b>	Filterable particulate and ammonia	EPA 5/027	April 2000
	PM10 and condensable	EPA 201A/202	April 2000
	NOx	EPA 7E	April 2000
	CO	EPA 10	April 2000
	VOC	EPA 25A	April 2000
	Opacity	EPA 9	April 2000
<b>Stack CT2 (LPG)</b>	Filterable particulate and ammonia	EPA 5/027	April 2000
	PM10 and condensable	EPA 201A/202	April 2000
	NOx	EPA 7E	April 2000
	CO	EPA 10	April 2000
	VOC	EPA 25A	April 2000
	Opacity	EPA 9	April 2000
<b>Stack CT1 (Diesel)</b>	Filterable particulate and ammonia	EPA 5/027	May 2000
	PM10 and condensable	EPA 201A/202	May 2000
	NOx	EPA 7E	May 2000
	CO	EPA 10	May 2000
	VOC	EPA 25A	May 2000
	Opacity	EPA 9	May 2000
<b>Stack CT2 (Diesel)</b>	Filterable particulate and ammonia	EPA 5/027	May 2000
	PM10 and condensable	EPA 201A/202	May 2000
	NOx	EPA 7E	May 2000
	CO	EPA 10	May 2000
	VOC	EPA 25A	May 2000
	Opacity	EPA 9	May 2000
<b>Stack CT1 (LNG)</b>	Filterable particulate and ammonia	EPA 5/027	August 2000
	PM10 and condensable	EPA 201A/202	August 2000
	NOx	EPA 7E	August 2000
	CO	EPA 10	August 2000
	VOC	EPA 25A	August 2000
			August 2001
			December 2002
Opacity	EPA 9	August 2000	

<b>Equipment</b>	<b>Objective</b>	<b>Test Method</b>	<b>Date</b>
<b>Stack CT2 (LNG)</b>	Filterable particulate and ammonia	EPA 5/027	August 2000
	PM10 and condensable	EPA 201A/202	August 2000
	NO <sub>x</sub>	EPA 7E	August 2000
	CO	EPA 10	August 2000
	VOC	EPA 25A	August 2000
			August 2001
			December 2002
Opacity	EPA 9	August 2000	
<b>Auxiliary Generators</b>	PM10 and condensable	EPA 201A/202	May 2000
	NO <sub>x</sub>	EPA 7E	May 2000
	CO	EPA 10	May 2000
	VOC	EPA 25A	May 2000
	Opacity	EPA 9	May 2000
<b>Cooling Towers</b>	Cooling drift rate	EPA 50	April 2000
<b>CEMS</b>	O <sub>2</sub>	RATA (EPA 3A)	April 2000
	NO <sub>x</sub>	RATA (EPA 7E)	
	CO	RATA (EPA 10)	
<b>COMS</b>	Opacity	Certification (40 CFR, Appendix B, Specification 1)	April 2000

**Appendix V – Monitoring equipment adjustments and calibration requirements for units EU-CT1, EU-CT2, EU-DB1, and EU-DB2**

Equipment	Calibration Method	Calibrations	Inspection	Frequency	Reporting Requirement	Reporting Frequency	Protocols
CEMS	Relative Accuracy Test Audit (RATA)	Annual	Annual	Annual	Report to EPA and EQB	60 days after RATA	40 CFR Part 60 Appendix F
	Cylinder Gas Audit (CGA)	3 calendar quarters	3 calendar quarters	3 calendar quarters	Report to EPA and EQB	3 per year	40 CFR Part 60 Appendix F
	Adjustments and Calibrations	Daily	Daily	Daily	Record	None	40 CFR Part 60 Appendix F
COMS	Calibration	Annual	Annual	Annual	Record	None	Teledyne Instruments Recommendations
	Adjustments	Annual	Annual	Daily	Record	None	Teledyne Instruments Recommendations
CMS							
Steam Injection	Manufacturers recommendations	Annual	Annual	Annual	Record	None	On line equipment/ Shut Down Item/ Rosemoung Mnf.
Ammonia Flor Meters	Manufacturers recommendations	Annual	Annual	Annual	Record	None	On line equipment/ Shut Down Item/ Rosemoung Mnf.
Fuel Mass Flor Meters	Manufacturers recommendations	Not required	Electronic check	Every 6 months	Record	None	Micro Motion/ Manufacturer
Duct Burners Fuel Meters	Manufacturers recommendations	Not required	Electronic check	Every 6 months	Record	None	Micro Motion/ Manufacturer