

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR RESOURCES

OPERATING PERMIT

Rhode Island State Energy Center, L.P.

PERMIT NO. RI-46-15 (R1)

(Renewal date: October 5, 2015) (Expiration date: October 5, 2020)

Pursuant to the provisions of Air Pollution Control Regulation No. 29, this operating permit is issued to:

Rhode Island State Energy Center, L.P. 24 Shun Pike Johnston, RI 02919

This permit shall be effective from the date of its issuance. All terms and conditions of the permit are enforceable by USEPA and citizens under the federal Clean Air Act, 42 U.S.C. 7401, et seq., unless specifically designated as not federally enforceable.

Douglas L. McVay, Chief Office of Air Resources Date of revision: 04/12/2016

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A. <u>Requirements for Emissions Units G001 and G002</u>

The following requirements are applicable to:

• The facility consists of two natural gas fired combustion turbine (CT) units each of which discharges exhaust gas through an associate Heat Recovery Steam Generator (HRSG). Each HRSG is equipped with duct firing capability. The facility is authorized to operate either or both CT's independently of one another, and either or both sets of duct burners independently of one another. Emission units G001 and G002, each of which is a 185 MW Siemens/Westinghouse Combustion turbine, Model No. 501FD2. G001 and G002 are equipped with Forney 102.5 MMBTU/Hr (HHV) duct burners in each of the Heat Recovery Steam Generators (HRSG), Model No. B10050. Emission units G001 and G002 are equipped with air pollution control device C001 and C002 respectively, which are Hitachi Zosen Corporation Selective Catalytic Reduction (SCR) systems. All units burn natural gas.

1. Emission Limitations

- a. Turbines only
 - (1) Nitrogen oxides (as nitrogen dioxide (NO₂))
 - (a) The concentration of nitrogen oxides discharged to the atmosphere from each stack shall not exceed 2.0 ppmv, on a dry basis, corrected to 15 percent O_2 (1-hour average). [RI-PSD-6(A)(1)(a)(1), 40 CFR 60.332(a)(1)]
 - (b) The emission rate of nitrogen oxides discharged to the atmosphere from each stack shall not exceed 16.2 lbs/hr. [RI-PSD-6(A)(1)(a)(2), 40 CFR 60.332(a)(1)]
 - (2) Carbon Monoxide (CO)
 - (a) The concentration of carbon monoxide discharged to the atmosphere from each stack shall not exceed 15.9 ppmv, on a dry basis, corrected to 15 percent O_2 (1 hour average). [RI-PSD-6(A)(1)(b)(1)]
 - (b) The emission rate of carbon monoxide discharged to the atmosphere from each stack shall not exceed 77.8 lbs/hr. [RI-PSD-6(A)(1)(b)(2)]

(3) Sulfur Dioxide (SO₂)

The emission rate of sulfur dioxide discharged to the atmosphere from each stack shall not exceed 0.0054 lbs per million BTU heat input (HHV) or a maximum of 11.8 lbs/hr, whichever is more stringent. [RI-PSD-6(A)(1)(c)(1), 40 CFR 60.333(a)]

(4) Particulate Matter less than 10 microns (PM-10)

The emission rate of PM-10 discharged to the atmosphere from each stack shall not exceed 0.009 lbs per million BTU heat input (HHV) or a maximum of 18.3 lbs/hr. [RI-PSD-6(A)(1)(d)(1)]

- (5) Volatile Organic Compounds (VOC)
 - (a) The concentration of volatile organic compounds discharged to the atmosphere from each stack shall not exceed 2.0 ppmv, on a dry basis, corrected to 15 percent O_2 (1-hour average). [RI-PSD-6(A)(1)(e)(1)]
 - (b) The emission rate of volatile organic compounds discharged to the atmosphere from each stack shall not exceed 5.6 lbs/hr. [RI-PSD-6(A)(1)(e)(2)]
- (6) Ammonia (NH₃)
 - (a) The concentration of ammonia discharged to the atmosphere from each stack shall not exceed 5 ppmv, on a dry basis, corrected to 15 percent O_2 (1-hour average). [RI-PSD-6(A)(1)(f)(1)]
 - (b) The emission rate of ammonia discharged to the atmosphere from each stack shall not exceed 14.8 lbs/hr. [RI-PSD-6(A)(1)(f)(2)]
- b. Turbines with duct burners firing
 - (1) Nitrogen oxides (as nitrogen dioxide (NO₂))
 - (a) The concentration of nitrogen oxides discharged to the atmosphere from each stack shall not exceed 2.0 ppmv, on a dry basis, corrected to 15 percent O_2 (1-hour average). [RI-PSD-6(A)(2)(a)(1), 40 CFR 60.332(a)(1)]
 - (b) The emission rate of nitrogen oxides discharged to the atmosphere from each stack shall not exceed 17.0 lbs/hr. [RI-PSD-6(A)(2)(a)(2), 40 CFR 60.332(a)(1)]

- (2) Carbon Monoxide (CO)
 - (a) The concentration of carbon monoxide discharged to the atmosphere from each stack shall not exceed 17.8 ppmv, on a dry basis, corrected to 15 percent O_2 (1 hour average). [RI-PSD-6(A)(2)(b)(1)]
 - (b) The emission rate of carbon monoxide discharged to the atmosphere from each stack shall not exceed 88.1 lbs/hr. [RI-PSD-6(A)(2)(b)(2)]
- (3) Sulfur Dioxide (SO₂)

The emission rate of sulfur dioxide discharged to the atmosphere from each stack shall not exceed 0.0054 lbs per million BTU heat input (HHV) or a maximum of 12.4 lbs/hr, whichever is more stringent. [RI-PSD-6(A)(2)(c)(1), 40 CFR 60.333(a)]

(4) Particulate Matter less than 10 microns (PM-10)

The emission rate of PM-10 discharged to the atmosphere from each stack shall not exceed 0.009 lbs per million BTU heat input (HHV) or a maximum of 20.7 lbs/hr. [RI-PSD-6(A)(2)(d)(1)]

- (5) Volatile Organic Compounds (VOC)
 - (a) The concentration of volatile organic compounds discharged to the atmosphere from each stack shall not exceed 2.9 ppmv, on a dry basis, corrected to 15 percent O_2 (1-hour average). [RI-PSD-6(A)(2)(e)(1)]
 - (b) The emission rate of volatile organic compounds discharged to the atmosphere from each stack shall not exceed 6.8 lbs/hr. [RI-PSD-6(A)(2)(e)(2)]
- (6) Ammonia (NH₃)
 - (a) The concentration of ammonia discharged to the atmosphere from each stack shall not exceed 5 ppmv, on a dry basis, corrected to 15 percent O_2 (1-hour average). [RI-PSD-6(A)(2)(f)(1)]
 - (b) The emission rate of ammonia discharged to the atmosphere from each stack shall not exceed 15.5 lbs/hr. [RI-PSD-6(A)(2)(f)(2)]

c. Opacity

Visible emissions from either G001 and/or G002 shall not exceed 10% opacity except for a period or periods aggregating no more than three minutes in any one hour. [RI-PSD-6(B)(2), 1.2] Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this permit. [1.4]

2. **Operating Requirements**

- a. Natural gas shall be the only fuel fired in G001, G002 and the duct burners. [RI-PSD-6(B)(1)]
- b. The combined quantity of natural gas combusted in the two duct burners in the two heat recovery steam generators shall not exceed 564,466,000 ft³ per year (12-month rolling average). [RI-PSD-6(B)(3)]
- c. The maximum heat input rate to G001 and G002 each, shall not exceed 2192.1 million BTUs per hour based on a reference temperature of -13°F (HHV). [RI-PSD-6(B)(5)]
- d. The maximum heat input rate to the duct burners in each heat recovery steam generator shall not exceed 102.5 million BTUs per hour (HHV). [RI-PSD-6(B)(6)]
- e. There shall be no bypassing of C001 and/or C002 during start-up, operation or shutdown. Ammonia will not be injected during start-up or shutdown unless the catalyst bed is at, or above, the manufacture's specified minimum operating temperature of 518°F. [RI-PSD-6(G)(1)]
- f. C001 and C002 shall be operated according to their design specifications whenever G001 and/or G002 is in operation or is emitting air contaminants. [16.2]
- g. Malfunctions
 - (1) In the case of a malfunction of C001 and/or C002, all reasonable measures shall be taken to assure resumption of the designed control efficiency as soon as possible. In the event that the malfunction of C001 and/or C002 is expected or may reasonably be expected to continue for longer than 24 hours and if the permittee wishes to operate G001 and/or G002 beyond that period, the Director shall be petitioned for a variance under Section 23-23-15 of the General Laws of Rhode Island, as amended. Such petition shall include but is not limited to, the following: [RI-PSD-6(F)(1) 16.3]

- (a) Identification of the specific air pollution control system (i.e. C001 and/or C002) and the source on which it is installed (i.e. G001 and/or G002), [RI-PSD-6(F)(1), 16.3(a)]
- (b) The expected period of time that control system will be malfunctioning or out of service, [RI-PSD-6(F)(1)(b), 16.3(b)]
- (c) The nature and quantity of air contaminants likely to be emitted during said period, [RI-PSD-6(F)(1)(c), 16.3(c)]
- (d) Measures that will be taken to minimize the length of said period, and [RI-PSD-6(F)(1)(d), 16.3(d)]
- (e) The reasons it would be impossible or impractical to cease the source operation during said period. [RI-PSD-6(F)(1)(e), 16.3(e)]

Nothing in this provision or in any state variance shall alter the permittee's obligation under the federal Clean Air Act to comply with the terms and conditions of this permit. [RI-PSD-6(F)(1)]

- (2) The permittee may seek to establish that a malfunction of C001 and/or C002 that would result in noncompliance with any of the terms of Section I.A. of this permit or any other applicable air pollution control rules and regulations was due to unavoidable increases in emissions attributable to the malfunction. To do so, the permittee must demonstrate to the Office of Air Resources that: [RI-PSD-6(F)(2)]
 - (a) The malfunction was not attributable to improperly designed air pollution control equipment, lack of preventative maintenance, careless or improper operation, or operator error; [RI-PSD-6(F)(2)(a)]
 - (b) The malfunction was not part of a recurring pattern indicative of inadequate design, operation or maintenance; [RI-PSD-6(F)(2)(b)]
 - (c) Repairs necessary to bring the air pollution control system back to operating at its design control efficiency were performed in an expeditious fashion. Off-shift labor and overtime should be utilized, to the extent practicable, to ensure that such repairs were completed as expeditiously as practicable. Any parts or material needed should be shipped overnight where possible or practical. [RI-PSD-6(F)(2)(c)]

- (d) All possible steps were taken to minimize emissions during the period of time that the repairs were performed. [RI-PSD-6(F)(2)(d)]
- (e) Emissions during the period of time that the repairs were performed will not cause or contribute to air pollution in violation of any applicable state or national ambient air quality standard. [RI-PSD-6(F)(2)(e)]
- (f) The reasons that it would be impossible or impractical to cease the source operation during said period. [RI-PSD-6(F)(2)(f)]

This demonstration must be provided to the Office of Air Resources, in writing, within two working days of the time when the malfunction occurred and contain a description of the malfunction, any steps taken to minimize emissions and corrective actions taken.

The permittee shall have the burden of proof in seeking to establish that noncompliance was due to unavoidable increases in emissions attributable to the malfunction. [RI-PSD-6(F)(2)]

3. Monitoring Requirements

- a. Continuous emission monitoring systems (CEMS) shall be, operated and maintained for nitrogen oxides, carbon monoxide, ammonia and oxygen. [RI-PSD-6(C)(1), 40 CFR 75.10(a)(1)-(4), 40 CFR 60.334(c)]
- b. The continuous monitors must satisfy USEPA performance specifications and quality assurance procedures in 40 CFR 60, Appendices B & F, and Part 75, Appendices A & B as applicable. [RI-PSD-6(C)(2), 40 CFR 75.10(a)(2), 40 CFR 75.10(d), 40 CFR 60.334(c), 40 CFR 60.13(e)]
- c. The permittee shall operate and maintain a continuous on-line gas chromatograph to measure the gross calorific value (GCVg) of the natural gas in accordance with the manufacturer's instructions. [Letter dated March 14, 2013 from Reid P. Harvey of the USEPA to Edward Trump of Entergy Rhode Island State Energy, L.P.]
- d. Sulfur Dioxide
 - The permittee shall certify, operate, maintain and record the output of fuel flow meters for natural gas and calculate the sulfur-dioxide emissions for each hour of operation as follows: [40 CFR 75.10(a), 40 CFR 75.11(d)(2) and 40 CFR 75, Appendix D]

 $M_{SO2g} = ER_{SO2} x HI_g$

Where:	M_{SO2g} =	Hourly mass of SO ₂ emissions from
	-	the combustion of pipeline natural
		gas, lb/hr.

- $ER_{SO2} = SO_2$ emission rate of 0.0006 lb/MMBTU for pipeline natural gas.
- $HI_g = Hourly heat input of pipeline natural gas calculated using the procedures in Appendix F of 40 CFR 75, in MMBTU/hr.$

$$HI_g = (Q_g \times GCV_g)/10000$$

Where: $Q_g =$ Fuel consumption in 100 scf/hr.

 GCV_g = Gross calorific value of natural gas fuel in BTU/scf as measured by a continuous on-line gas chromatograph, provided on an hourly basis. [Letter dated March 14, 2013 from Reid P. Harvey of the USEPA to Edward Trump of Entergy Rhode Island State Energy, L.P.]

- For periods of missing GCV_g data, the permittee shall use substitute data values in the calculations, as follows: [Letter dated March 14, 2013 from Reid P. Harvey of the USEPA to Edward Trump of Entergy Rhode Island State Energy, L.P.]
 - (a) Provided that at least on valid GCV_g measurement is obtained in a given month, substitute, for each hour of the missing data period, the arithmetic average of the GCV_g values from the hour before and the hour after the missing data incident; or
 - (b) In accordance with section 2.4.1 of Appendix D to 40 CFR Part 75, if no valid GCV_g values are obtained in a given month, substitute, for each hour of the missing data period, the maximum potential GCV_g value of 110,000 Btu per 100 scf, from Table D-6 in Appendix D to Part 75.

- e. Nitrogen Oxides
 - (1) The permittee shall install, certify, operate and maintain, in accordance with the requirements of 40 CFR Part 75, a NO_x continuous emission monitoring system (consisting of the NO_x pollutant concentration monitor, the CO₂ diluent gas monitor and a data acquisition and handling system) to measure NO_x emission rate and for a fuel flow meter for natural gas to measure heat input rate. The permittee shall account for total NO_x emissions, both NO and NO_2 , either by monitoring for both NO and NO_2 or by monitoring for NO only and adjusting the emissions data to account for NO_2 . [40 CFR 75.10(a)(2)]
 - (2) The NO_x continuous emission monitoring system must meet the initial certification and recertification requirements in 40 CFR 75.20, and the quality assurance and quality control requirements in 40 CFR 75.21 and Appendix B of 40 CFR Part 75. [40 CFR 75.20, 40 CFR 75.21]
 - (3) The permittee shall provide substitute data according to the missing data procedures in 40 CFR Part 75, Subpart D. [40 CFR 75.30(a)]
 - (4) The permittee shall ensure that the NO_x continuous emission monitoring system meets the equipment, installation, and performance specifications in Appendix A of 40 CFR Part 75; and is maintained according to the quality assurance and quality control procedures in Appendix B of 40 CFR Part 75; and shall record NO_x emissions in lbs/MMBtu. [40 CFR 75.10(b)]
 - The continuous emission monitoring system for nitrogen oxides (5) shall complete a minimum of one cycle of operation (sampling, analyzing and data recording) for each successive 15-minute period. The permittee shall reduce the NOx concentration and NOx emission rate data collected by the monitors to hourly averages, computed using at least one data point in each fifteen minute quadrant of an hour where the unit combusted fuel during that quadrant of an hour. An hourly average may be computed from at least two data points separated by a minimum of 15 minutes if data are unavailable as a result of the performance of calibration, quality assurance, or preventative maintenance activities, backups of data from the data acquisition and handling system, or recertification. The permittee shall use all valid measurements or data points collected during an hour to calculate the hourly averages. All data points collected during the hour shall be, to the extent practicable, evenly spaced over the hour. [40 CFR 75.10(d)(1), 40 CFR 60.334(b)(2), 40 CFR 60.334(b)(3)]

- (6) The permittee shall continuously measure natural gas flow to G001 and G002 using fuel flow meter systems certified under 40 CFR Part 75, Appendix D. The permittee shall determine and record the heat input to G001 and G002 for every hour or part of an hour natural gas is combusted following the procedures in 40 CFR 75, Appendix F. [RI-PSD-6(C)(5), 40 CFR 75.10(c)]
- (7) The permittee shall ensure that the NO_x continuous emission monitoring system and each component thereof is capable of accurately measuring, recording and reporting data and shall not incur an exceedance of the full scale range, except as provided in sections 2.1.1.5, 2.1.2.5 and 2.1.4.3 of 40 CFR 75, Appendix A. [40 CFR 75.10(f)]
- (8) The emissions measurements recorded and reported in accordance with this subsection shall be used to determine compliance with the nitrogen oxides emission limitations in Conditions I.A.1.a and I.A.1.b of this permit. [40 CFR 60.334(b)(3)(i)]
- (9) The permittee shall calculate hourly NO_x mass emissions (in lbs) for each emission unit by multiplying the hourly NO_x emission rate in (lbs/MMBTU) by the hourly heat input rate (in MMBTU/hr) and the unit operating time. The permittee shall also calculate quarterly and cumulative year-to-date NO_x mass emissions and cumulative NO_x mass emissions for the ozone season (in tons) by summing the hourly NO_x mass emissions according to the applicable procedures in section 8 of Appendix F of 40 CFR 75. [29.6.3(b)]
- (10) The permittee shall not use any alternative monitoring system, alternative reference method, or any other alternative for the required continuous emission monitoring system without having obtained prior written approval in accordance with 40 CFR 75.23, 40 CFR 75.48 and 40 CFR 75.66. [40 CFR 75.5(c)]
- (11) The permittee shall not operate G001 and/or G002 so as to discharge, or allow to be discharged, NOx emissions to the atmosphere without accounting for all such emissions in accordance with the applicable provisions of this section and 40 CFR Part 75.10 through 75.19. [40 CFR 75.5(d)]
- (12) The permittee shall not disrupt the continuous emission monitoring system, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording NOx mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed pursuant to 40 CFR Part 75.21 and Appendix B to 40 CFR Part 75. [40 CFR 75.75(e)]

- (13) The permittee shall not retire or permanently discontinue use of the continuous emission monitoring system, any component thereof, or any other approved emission monitoring system under this section, except under any one of the following circumstances:
 - (a) During the period that the unit is covered by a retired unit exemption under 40 CFR 72.8 that is in effect;
 - (b) The permittee is monitoring emissions from the unit with another certified monitoring system approved, in accordance with the applicable provisions of this section and 40 CFR Part 75, by the Department, for use at that unit that provides emission data for the same pollutant or parameter as the retired or discontinued monitoring system; or
 - (c) The designated representative submits notification of the date of certification testing of a replacement monitoring system in accordance with 40 CFR 75.20 and 75.61 and the permittee recertifies thereafter a replacement monitoring system in accordance with 40 CFR 75.20. [40 CFR 75.5(f)]
- (14) Failure of the NO_x continuous emission monitoring system to acquire the minimum number of data points for calculation of an hourly average in paragraph (6) of this subsection shall result in the failure to obtain a valid hour of data and the loss of such component data for the entire hour. For the NO_x continuous emission monitoring system, an hourly average NO_x emission rate in lb/MMBtu is valid only if the minimum number of data points is acquired by both the NO_x pollutant concentration monitor and the diluent monitor (CO₂). If a valid hour of data is not obtained, the permittee shall estimate and record emissions for the missing hour by means of the automated data acquisition and handling system, in accordance with the applicable procedure for missing data substitution in 40 CFR 75, Subpart D. [40 CFR 75.10(d)(3), 40 CFR 60.334(b)(3)(iii)]
- (15) The relative accuracy test audit (RATA) of the NO_x and diluent monitors shall be performed on a ppm and lb/MMBTU basis for NO_x and a percent O₂ basis for oxygen. [40 CFR 75, Appendix A, 40 CFR 60.334(c)(1)(i)]
- f. Carbon Monoxide
 - (1) The continuous emission monitoring system for carbon monoxide consists of the carbon monoxide continuous emission monitor and the oxygen continuous emission monitor. [40 CFR 60, Appendix B]

- (2) The continuous emissions monitoring system for carbon monoxide must satisfy USEPA performance specifications and quality assurance procedures in 40 CFR 60, Appendices B & F, as applicable. [RI-PSD-6(C)(2)]
- (3) The permittee shall check the zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with the applicable requirements of 40 CFR 60 Subpart A and Appendix B. [40 CFR 60.13(d)(1)]
- (4) The continuous monitoring system for carbon monoxide shall complete a minimum of one cycle of operation (sampling, analyzing and data recording) for each successive 15-minute period. [40 CFR 60.13(e)(2)]
- (5) The permittee shall reduce all data to 1-hour averages, computed from four or more data points equally spaced over each 1-hour period. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibrations checks, zero and span adjustments shall not be included in the data averages computed. [40 CFR 60.13(h)]
- g. Carbon Dioxide

The permittee shall certify, operate, maintain and record the output of fuel flow meters for natural gas and calculate the carbon dioxide emissions for each day of operation as follows:

 $W_{CO2} = (F_c x H x U_f x MW_{CO2})/2000$

Where:	W _{CO2}	=	Daily mass of CO_2 emissions from the combustion of pipeline natural gas, tons/day.
	Fc	=	Carbon based F-factor, 1040 scf/MMBTU for pipeline natural gas.
	Н	=	Daily heat input of pipeline natural gas calculated using the company records.
	U_{f}	=	$1/385 \text{ scf CO}_2/\text{lb-mole}$ at 14.7 psia and 68°F
	MW _{CO}	₀₂ =	Molecular weight of carbon dioxide (44 lb/mole).

[40 CFR 75.10(a)(3)(ii), 40 CFR 75.13(b) and 40 CFR 75, Appendix G]

h. Ammonia

The permittee shall monitor ammonia concentrations in the turbine flue gases by using a second nitrogen oxides CEMS and an ammonia injection rate monitor to calculate ammonia emissions. This upstream probe shall be located between the duct burners and the selective catalytic reduction system and upstream of the stack nitrogen oxides CEMS. This condition shall not be construed to set a minimum control efficiency limit for nitrogen oxide emissions from G001 and G002. [RI-PSD-5(C)(1)]

i. Catalyst Bed Temperature

The permittee shall continuously measure the catalyst bed temperature of C001. [RI-PSD-5(C)(7)]

4. Testing Requirements

a. Opacity

Test for determining compliance with the opacity emissions limitations specified in Conditions I.A.1.c of this permit shall be performed as per 40 CFR 60, Appendix A, Method 9. Additionally, all observers must qualify as per 40 CFR 60, Appendix A, Method 9. [1.3.1, 1.3.2]

b. Nitrogen Oxides

Monitoring of nitrogen fuel is not required so long as the facility fires solely with pipeline-quality natural gas. The permittee will use CEMS to monitor NO_x emissions from G001 and G002. The CEMS will be maintained and certified in accordance Condition I.A.3.e of this permit. [Letter dated April 24, 2001 from Ken Moraff of the USEPA to Richard Piper of FPLE Rhode Island Energy Partners, L.P., RI-PSD-6(G)(12), 60.334(h)(4)]

- c. Sulfur Dioxide
 - (1) Monitoring of sulfur fuel is not required so long as the following conditions are met: [Letter dated April 24, 2001 from Ken Moraff of the USEPA to Richard Piper of FPLE Rhode Island Energy Partners, L.P., RI-PSD-6(G)(12), 60.334(h)(4)]
 - (a) G001 and G002 are fired solely with pipeline-quality natural gas;
 - (b) G001 and G002 has been issued and is in possession of an approved Phase II Acid Rain Permit;

(c) A Monitoring Plan, certified by signature of the Designated Representative for emission units G001 and G002, has been submitted for each unit.

5. Recordkeeping Requirements

- a. Data shall be recorded continuously in accordance with the requirements of 40 CFR 60 and 40 CFR 75. Continuous emission monitoring data may be used as evidence in determining the permittee's compliance/noncompliance with the conditions and emission limitations contained in Section I.A of this permit [RI-PSD-6(C)(4)]
- b. Natural gas flow to each combustion turbine and each duct burner shall be continuously recorded. [RI-PSD-6(C)(5)]
- c. Inlet temperature to the SCR catalyst shall be continuously recorded. [RI-PSD-6(C)(7)]
- d. The permittee shall maintain a record of all measurements, performance evaluations, calibration checks, and maintenance or adjustments for each continuous monitor in accordance with the requirements of 40 CFR 60 and 40 CFR 75. [RI-PSD-6(E)(1)]
- e. The permittee shall include information on the maintenance and qualityassurance activities associated with the continuous on-line gas chromatographs in the permittee's quality control/quality assurance program that is required by section 1 of Appendix B to Part 75. [Letter dated March 14, 2013 from Reid P. Harvey of the USEPA to Edward Trump of Entergy Rhode Island State Energy, L.P.]
- f. The permittee shall maintain the following records: [RI-PSD-6(E)(5)]
 - (1) The hours of operation, including any start up, shut down or malfunction in the operations of the facility. [RI-PSD-6(E)(5)(a)]
 - (2) The quantity of natural gas combusted in the duct burners in each heat recovery steam generator. [RI-PSD-6(E)(5)(b)]
 - (3) Any malfunction of C001 and/or C002. [RI-PSD-6(E)(5)(c)]
 - (4) Inlet temperature to the SCR catalyst. [RI-PSD-6(E)(5)(d)]
- g. The permittee shall, on a monthly basis, no later than 10 days after the first of each month, determine the combined quantity of natural gas combusted in the two duct burners in the two heat recovery steam generators for the previous 12 months. The permittee shall keep records of this determination and provide such records to the Office of Air Resources upon request. [RI-PSD-6(E)(10)]

h. The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring devices and performance testing measurements; all CMS calibration checks; adjustments and maintenance performance on these systems or devices; and all other information required shall be recorded in a permanent form suitable for inspection. [40 CFR 60.7(f)]

6. **Reporting Requirements**

- a. The permittee shall notify the Office of Air Resources, in writing, after an exceedance of any emission limitation is discovered. This notification shall be made within five (5) days of the exceedance. Notification shall be provided on forms furnished by the Office of Air Resources and must provide all of the information requested on the form. This notification shall not excuse the permittee of any other reporting obligations under the federal or state law. An exceedance of any emission limits due to an emergency or malfunction shall not be deemed a federally permitted release as that term is used in 42 U.S.C. section 9601(10). [RI-PSD-6(E)(2)]
- b. The permittee shall notify the Office of Air Resources, in writing, after the discovery that a continuous emission monitor has experienced a malfunction that results in the failure to meet an applicable data capture requirement. This notification shall be made within five (5) days of when the continuous emission monitor malfunctioned. Notification shall be provided on forms furnished by the Office of Air Resources and must provide all of the information requested on the form. [RI-PSD-6(E)(3)]
- c. The permittee shall notify the Office of Air Resources of any anticipated noncompliance with the terms of Section I.A of this permit or any other applicable air pollution control rules or regulations. [RI-PSD-6(E)(4)]
- d. The permittee shall notify the Office of Air Resources in writing within 15 days, whenever the combined quantity of natural gas combusted in the two duct burners in the two heat recovery steam generator exceeds 564,466,000 ft³ in any 12-month period. [RI-PSD-6(E)(12)]
- e. The permittee shall submit a written report of excess emissions as measured by a continuous emission monitor for every calendar quarter. All quarterly reports shall be received no later than 30 days following the end of each calendar quarter and shall include the following information: [RI-PSD-6(E)(20), 40 CFR 60.7(c)]
 - (1) The date and time of commencement and completion of each time period of excess emissions and the magnitude of the excess emissions. [RI-PSD-6(E)(20), 40 CFR 60.7(c)(1)]

- (2) Identification of the suspected reason for the excess emissions and any corrective action taken. [RI-PSD-6(E)(20), 40 CFR 60.7(c)(2)]
- (3) The date and time period any continuous emission monitor was inoperative, except for zero and span checks and the nature of system repairs or adjustments. [RI-PSD-6(E)(20), 40 CFR 60.7(c)(3)]
- (4) When none of the above items have occurred, such information shall be stated in the report. The reporting format and content described in 40 CFR 60 shall be deemed acceptable for satisfaction of this requirement. [RI-PSD-6(E)(20), 40 CFR 60.7(c)(4)]
- f. The excess emissions and monitoring systems performance report shall report separately, for nitrogen oxides and sulfur dioxide, excess emissions and monitor downtime as defined in 40 CFR 60.334(j). Excess emissions and monitor downtime that shall be reported separately are defined as follows:
 - (1) Nitrogen Oxides
 - (a) An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NO_X concentration exceeds 75 ppmv, on a dry basis, corrected to 15% O₂. A "4hour rolling average NO_X concentration" is the arithmetic average of the average NO_X concentration measured by the CEMS for a given hour (corrected to 15 percent O₂) and the three unit operating hour average NO_X concentrations immediately preceding that unit operating hour. [40 CFR 60.334(j)(1)(iii)(A)]
 - (b) A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO_X concentration or diluent (or both). [40 CFR 60.334(j)(1)(iii)(B)]
 - (2) Sulfur Dioxide
 - (a) An excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. [40 CFR 60.334(j)(2)(i)]
 - (b) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required

sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample. [40 CFR 60.334(j)(2)(iii)]

- g. The summary report form shall contain the information in Condition I.A.6.e.(1-4) and be in the format shown in 40 CFR 60 subsection 60.7 Figure 1 unless otherwise specified by the Office of Air Resources. One summary report form shall be submitted for each pollutant monitored at each affected facility. [40 CFR 60.7(d)]
- h. If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in Condition I.A.6.e of this section need not be submitted unless requested by the Office of Air Resources. [40 CFR 60.7(d)(1)]
- i. If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in Condition I.A.6.e of this section shall both be submitted. [40 CFR 60.7(d)(2)]
- j. The designated representative for Rhode Island State Energy Center, L.P. shall submit written notice to the Administrator, USEPA Region 1 and the Office of Air Resources as required by 40 CFR 75.61. [40 CFR 75.61(a)]
- k. The facility shall have the capability of transmitting all of the collected continuous monitoring data to the Office of Air Resources via a telemetry system. The permittee must provide all of the necessary funds for operation of this equipment. [RI-PSD-6(C)(8)]
- 1. The permittee shall report to the Office of Air Resources in writing, whenever the sulfur content of the natural gas fired in G001 and G002 exceeds 0.8%. [40 CFR 60.334(b)]

7. Other Requirements

- a. To the extent consistent with the requirements in Section I.A. of this permit and applicable federal and state laws, the facility shall be operated in accordance with the representation of the facility in the Major Source permit application. [RI-PSD-6(G)(3)]
- b. Emission units G001 and G002 are subject to the requirements of the Federal New Source Performance Standards 40 CFR 60, Subparts A

(General Provisions), Da (Electric Utility Steam Generating Units) and GG (Stationary Gas Turbines). Compliance with all applicable provisions of these regulations is required. [RI-PSD-6(G)(5)]

8. Startup/Shutdown Conditions

- a. G001 and G002 startup shall be defined as that period of time from initiation of combustion turbine firing until the unit reaches steady state load operation. Steady state operation shall be reached when the combustion turbine reaches minimum load (70%) and the steam turbine is declared available for load changes. This period shall not exceed 90 minutes for a hot start, 180 minutes for a warm start, or 300 minutes for a cold start. A warm start shall be defined as startup when the generating unit has been down for more than 2 hours and less than or equal to 24 hours. A cold start shall be defined as startup when the generating unit has been down for more than 2 hours or a startup when the heat recovery steam generator high-pressure drum is below 450 psig. Qualifying for a cold startup supersedes a warm startup or hot startup qualification. Unit shutdown shall be defined as that period of time from steady state operation to cessation of combustion turbine firing. This period shall not exceed 60 minutes. [RI-PSD-6(H)(1)]
- b. The emission limitations of Conditions I.A.1.a(1-6) and I.A.1.b(1-6) shall not apply to G001 or G002 startup/shutdown conditions. [RI-PSD-6(H)(2)]
- c. Hourly average emissions of nitrogen oxides, carbon monoxide and ammonia shall not exceed the following limits during turbine startup: [RI-PSD-6(H)(3)]
 - (1) Nitrogen oxides (as nitrogen dioxide (NO₂)
 - (a) The concentration of nitrogen oxides discharged to the atmosphere from each stack shall not exceed 70 ppmv, on a dry basis, corrected to 15 percent O_2 . [RI-PSD-6(H)(3)(a)(1)]
 - (b) The emission rate of nitrogen oxides discharged to the atmosphere from each stack shall not exceed 195 lbs/hr. [RI-PSD-6(H)(3)(a)(2)]
 - (2) Carbon Monoxide (CO)
 - (a) The concentration of carbon monoxide discharged to the atmosphere from each stack, during a hot start or a warm start, shall not exceed 2892 ppmv, on a dry basis, corrected to 15 percent O₂. [RI-PSD-6(H)(3)(b)(1)]
 - (b) The concentration of carbon monoxide discharged to the atmosphere from each stack, during a cold start, shall not

exceed 4172 ppmv, on a dry basis, corrected to 15 percent O_2 . [RI-PSD-6(H)(3)(b)(2)]

- (c) The emission rate of carbon monoxide discharged to the atmosphere from each stack, during a hot start or a warm start, shall not exceed 4230 lbs/hr. [RI-PSD-6(H)(3)(b)(3)]
- (d) The emission rate of carbon monoxide discharged to the atmosphere from each stack, during a cold start, shall not exceed 6615 lbs/hr. [RI-PSD-6(H)(3)(b)(4)]
- (3) Ammonia
 - (a) The concentration of ammonia discharged to the atmosphere from each stack shall not exceed 22 ppmv, on a dry basis, corrected to 15 percent O_2 . [RI-PSD-6(H)(3)(c)(1)]
 - (b) The emission rate of ammonia discharged to the atmosphere from each stack shall not exceed 40 lbs/hr. [RI-PSD-6(H)(3)(c)(2)]

The average of the hourly emission rates for these emissions during each startup/shutdown period shall be used to determine compliance with this condition. [RI-PSD-6(H)(3)]

- d. Hourly average emissions of nitrogen oxides, carbon monoxide and ammonia shall not exceed the following limits during turbine shutdown: [RI-PSD-6(H)(4)]
 - (1) Nitrogen oxides (as nitrogen dioxide (NO₂)
 - (a) The concentration of nitrogen oxides discharged to the atmosphere from each stack shall not exceed 73 ppmv, on a dry basis, corrected to 15 percent O_2 . [RI-PSD-6(H)(4)(a)(1)]
 - (b) The emission rate of nitrogen oxides discharged to the atmosphere from each stack shall not exceed 129 lbs/hr. [RI-PSD-6(H)(4)(a)(2)]
 - (2) Carbon Monoxide (CO)
 - (a) The concentration of carbon monoxide discharged to the atmosphere from each stack shall not exceed 3548 ppmv, on a dry basis, corrected to 15% O₂. [RI-PSD-6(H)(4)(b)(1)]

- (b) The emission rate of carbon monoxide discharged to the atmosphere from each stack shall not exceed 5531 lbs/hr. [RI-PSD-6(H)(4)(b)(2)]
- (3) Ammonia
 - (a) The concentration of ammonia discharged to the atmosphere from each stack shall not exceed 16 ppmv, on a dry basis, corrected to 15 percent O_2 . [RI-PSD-6(H)(4)(c)(1)]
 - (b) The emission rate of ammonia discharged to the atmosphere from each stack shall not exceed 36 lbs/hr. [RI-PSD-6(H)(4)(c)(2)]

The average of the hourly emission rates for these emissions during each startup/shutdown period shall be used to determine compliance with this condition. [RI-PSD-6(H)(4)]

e. The permittee shall follow proper operating procedures during turbine startup/shutdown conditions to minimize the emissions of air contaminants to the maximum extent practical. The procedures to be followed during turbine startup/shutdown conditions shall be those that were submitted to the Office of Air Resources prior to startup of this facility. [RI-PSD-6(H)(5)]

B. <u>Requirements for Emissions Unit P005</u>

The following requirements are applicable to:

• Emission unit P005, which is a Psychrometric Systems Inc., Cooling Tower, Model No. CFF-424831-9I-33.

1. Operating Requirements

- a. P005 shall be equipped with High Efficiency Drift Eliminators to minimize water drift losses and plume visibility. In addition, should plant personnel observe the cooling tower plume descending upon Shun Pike, the permittee will immediately implement operational plume control techniques to minimize the plume and will increase the free chlorine to 0.7 ppm as long as total chlorine remains less than 3 ppm. [RI-PSD-6(L)(1)]
- b. Drift from P005 shall be limited to 0.0005% of circulating water flow. [RI-PSD-6(L)(2)]
- c. The permittee must perform performance tests to verify the operating efficiency of the High Efficiency Drift Eliminators. These tests must be performed by a licensed Cooling Tower Institute drift testing firm. The tests

at a minimum must sample three cells within a three year period with a minimum of 2 runs per cell. The cells sampled must be rotated to ensure that all cells have been tested in a 5-year period. The protocol for this testing must be submitted to the Office of Air Resources for review and approval 60 days prior to testing. The permittee must coordinate with the Office of Air Resources in scheduling the test. The Office of Air Resources will have the right to have an inspector present for all or part of the test. [RI-PSD-6(L)(4)]

- d. The permittee shall not use chromium-based biocides and/or chromium based fungicides in the cooling tower. [RI-PSD-6(L)(6)]
- e. The permittee shall operate and maintain a wastewater treatment system, which will accomplish tertiary treatment for the portion of the Cranston Water Pollution Control Facility (WPCF) effluent that will be used as cooling water for the facility. The tertiary treatment filtration system consists of a Zeeweed ultrafiltration system with a design output of 1000 gallons per minute and an Aqua Aerobics disk filter system with a design output of 1700 gallons per minute. The filtration system must remove solids so that the total suspended solids (TSS) content of the treated effluent does not exceed 5 mg/l at the exit from the system prior to chlorination and must remove phosphorous if necessary, as determined by either the Office of Air Resources or the permittee, to ensure that the nutrient load is minimized within the cooling tower basin.. [RI-PSD-6(M)(1)]
- f. The permittee shall adjust the chlorination prior to the wastewater being transported from the Cranston WPCF site in order to maintain a total chlorine residual of 1.0 mg/l at the terminal point of the wastewater pipeline. The minimum chlorine contact time in the wastewater pipeline shall be 3 hours. [RI-PSD-6(M)(3)]
- g. The permittee shall maintain a free chlorine residual of 0.5 mg/l in the cooling tower basin. [RI-PSD-6(M)(4)]
- h. The permittee shall not transport the treated wastewater effluent in the wastewater pipeline and shall not use the treated effluent in the cooling tower, if the TSS at the exit of the tertiary treatment filtration unit, prior to chlorination, exceeds 5 mg/l. However, the permittee may discharge water with TSS in excess of 5 mg/l back to Cranston in order to flush lines and/or recover from upset events. [RI-PSD-6(M)(5)]
- i. The permittee shall maintain the pH of the water in the cooling tower basin within the range 6.0 to 9.0. [RI-PSD-6(M)(6)]
- j. The fecal coliform bacteria level at the terminal point of the cooling water pipeline must not exceed zero. This limitation may be verified by a testing result of "not detectable". If a test result indicates that fecal coliform is present, the permittee shall immediately inspect and adjust, if necessary, the

filtration system and chlorination levels. If the subsequent test, conducted at the frequency specified in condition I.B.3.e, also shows detectable fecal coliform bacteria, the permittee must follow procedures established in the Operating Protocol, to terminate treated wastewater effluent pumpage to the cooling tower until the specified corrective actions are implemented and the fecal coliform level is not detectable.

The following constitutes a violation of the fecal coliform limitation:

- (1) If the permittee collects at least 40 samples per month, the facility is not in compliance with the fecal coliform limitation if more than 5% of the samples collected during the month are fecal coliform positive.
- (2) If the permittee collects less than 40 samples per month, the facility is not in compliance with the fecal coliform limitation if more than one sample collected during the month is fecal coliform positive. [RI-PSD-6(M)(7)]

2. Monitoring Requirements

- a. The permittee shall perform a test for total suspended solids once per day at the exit of the tertiary treatment filtration system, prior to post-treatment chlorination, the results of which may not exceed 5 mg/l. In addition the facility shall be equipped with a turbidity monitor to continuously monitor the filtered effluent at the exit of this system. This monitor must be set to alarm if the treated effluent equals or exceeds a turbidity limit which corresponds to the TSS limitation of 5 mg/l. [RI-PSD-6(N)(1)]
- b. The permittee shall monitor total residual chlorine continuously at the terminal point of the wastewater pipeline on the plant site. [RI-PSD-6(N)(2)]
- c. The permittee shall monitor the free chlorine residual continuously in the cooling tower basin. [RI-PSD-6(N)(3)]
- d. The permittee shall continuously monitor turbidity in the effluent from the tertiary treatment filtration system. [RI-PSD-6(N)(4)]
- e. The permittee shall continuously monitor the pH of water in the cooling tower basin. This monitor must have the ability to record pH in a range of 0-12 and must be equipped with a recorder. [RI-PSD-6(N)(5)]
- f. If the characteristics of Cranston WPCF effluent change more than 20% (i.e. nitrification, significant changes in industrial loadings, significant changes in domestic loadings), or the WPCF institutes a process or facility change which would require notification and approval from the Department or if the City of Cranston has any instances of pass-through or interference

and/or periods of non-compliance, the Office of Air Resources may require additional monitoring beyond that required in conditions I.B.3.a and I.B.3.b. [RI-PSD-6(N)(10)]

g. The permittee shall monitor the concentration of chloroform, dichloromethane, carbon tetrachloride, 1,2-dichloroethane and total trihalomethanes in the cooling water after transport to the facility but prior to use in P005 for a period of three consecutive days per year. This sampling should be conducted in the first two weeks of July each year. The results of this monitoring shall be submitted to the Office of Air Resources within 30 days after each monitoring period. [RI-PSD-6(N)(11)]

3. Testing Requirements

- a. The permittee shall perform semi-annual testing of the effluent at the outlet of the tertiary treatment filtration unit for metals, inorganic and volatile organic compounds. One of the semi-annual tests must be conducted during the first two weeks in July each year. Analytical tests must quantify the following parameters at a minimum: Cyanide, Cadmium, Copper, Chromium, Lead, Mercury, Nickel, Silver and Zinc. Analytical tests for volatile organic compounds shall include the following at a minimum: Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane and Trichloroethylene. The permittee may propose alternatives to this testing requirement after conducting a minimum of six months of testing. Such alternatives shall not be implemented until the Office of Air Resources issues a written approval of the proposal. [RI-PSD-6(N)(7)]
- b. Results of the analytical tests performed pursuant to Conditions I.B.3.a-b of this permit shall be submitted to the Office of Air Resources within 30 days of testing. [RI-PSD-6(N)(9)]
- c. All analyses performed in Conditions I.B.3.a-b of this permit shall be performed at a certified laboratory. [RI-PSD-6(N)(8)]
- d. The permittee shall perform sampling once per day, for fecal coliform bacteria at the terminal point of the wastewater pipeline on the Rhode Island State Energy Center, L.P. site, using method 9211(d) from Standard Methods for the Examination of Water and Wastewater. The time period between consecutive samples shall not exceed 24 hours.[RI-PSD-6(N)(6)]

4. Recordkeeping Requirements

a. The permittee shall continuously record the pH of water in the cooling tower basin. This monitor must have the ability to record pH in a range of 0-12 and must be equipped with a recorder. This data must be maintained for a period a three years and must be available for review by the Office of Air Resources. [RI-PSD-6(N)(5)]

C. <u>Requirements for Emission Unit G006</u>

The following Requirements are applicable to:

• Emission unit G006, is a 265 HP John Deere Internal Combustion Engine, Model No. 6081-A, which burns #2 fuel oil. Emission unit G006 is an emergency diesel fire pump engine.

1. Emission Limitations

a. Opacity

The permittee shall not emit into the atmosphere, any air contaminant, for a period or periods aggregating more than three minutes in any one hour, which is greater than or equal to 20 percent opacity. [1.2] Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this permit. [1.4]

- b. Sulfur Dioxide
 - (1) Except as may be specified in other provisions of this permit, unless the Director determine, pursuant to subsection 8.7 of RI Air Pollution Control Regulation No. 8, that a shortage of fuel oil meeting the requirements of this permit, the permittee shall not use or store fuel oil having a sulfur content in excess of the following, except for use with motor vehicles: [8.2.1]
 - a. Through June 30, 2018 all distillate or biodiesel fuel oil burned at the facility shall contain no more than 0.05 percent sulfur by weight (500 ppm).
 - b. On or after July 1, 2018 all distillate or biodiesel fuel oil burned at the facility shall contain no more than 0.0015 percent sulfur by weight (15 ppm).

2. **Operating Requirements**

- a. The G006 shall be operated only during emergency situations that would require the pump to operate to fight a fire at the facility or for maintenance purposes to assure that the system is in working order. Operation for maintenance purpose shall be limited to 36 hours per year (12 month rolling average). [RI-PSD-6(B)(4), 27.2.3]
- b. The permittee must comply with the following requirements for G006, except for periods during periods of startup: [40 CFR 63.6603(a)]

- (1) Change oil and filter every 500 hours of operation or annually, whichever comes first; and [40 CFR 63.6603(a), 40 CFR 63 Subpart ZZZZ Table 2d(4)(a)]
- (2) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and [40 CFR 63.6603(a), 40 CFR 63 Subpart ZZZZ Table 2d(4)(b)]
- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63.6603(a), 40 CFR 63 Subpart ZZZZ Table 2d(4)(c)]
- The permittee has the option of utilizing an oil analysis program in order to c. extend the specified oil change requirement in Condition I.C.2.b(1) of this permit. The oil analysis must be performed at the same frequency specified for changing the oil in Condition I.C.2.b(1) of this permit. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the permittee is not required to change the oil. If any of the limits are exceeded, the permittee must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee must change the oil within 2 business days or before commencing operation, whichever is later. The permittee must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63.6625(i), 40 CFR Subpart ZZZZ Table 2d(4)(a) and footnote 1]
- d. If G006 is operating during an emergency and it is not possible to shut down the engine in order to perform the requirements on the schedule of Condition I.C.2.b of this permit, or if performing the requirements of Condition I.C.2.b of this permit on the required schedule would otherwise pose an unacceptable risk under federal or state law, the requirements of Condition I.C.2.b of this permit can be delayed until the emergency is over or the unacceptable risk under federal or state law has abated. The requirements of Condition I.C.2.b of this permit should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal or state law has abated. The permittee must report any failure to perform the requirements of Condition I.C.2.b of this permit on the schedule required and the federal or state law under which the risk was deemed unacceptable. [40 CFR 63 Subpart ZZZZ, Table 2d(4) footnote 2]

- e. The permittee must be in compliance with the emissions limitations, operating limitations, and other requirements for G006 at all times. [40 CFR 63.6605(a)]
- f. At all times the permittee must operate and maintain G006 including associated air pollution control equipment (if any) and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation of the source. [40 CFR 63.6605(b)]
- g. The permittee must operate and maintain G006 and after-treatment control device (if any) according to the manufacturer's emission-related operation and maintenance instructions or the permittee shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the emergency generator in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63.6625(e)(3)]

3. Monitoring Requirements

a. The permittee shall maintain a non-resettable elapsed time meter on G006 to indicate, in cumulative hours, the elapsed engine operating time. [RI-PSD-6(C)(6), 27.6.10(b), 40 CFR 63.6625(f)]

4. Testing Requirements

a. Opacity

Tests for determining compliance with the opacity emission limitations specified in Condition I.C.1.a of this permit shall be performed per 40 CFR 60, Appendix A, Method 9. Additionally, all observers must qualify as per 40 CFR 60, Appendix A, Method 9. [1.3.1, 1.3.2]

b. Sulfur Oxides

Compliance with the sulfur limitations contained in Condition I.C.1.b of this permit shall be determined by the procedures referenced in Condition II.U.2 of this permit.

c. The permittee shall comply with Condition I.C.2.b of this permit by either: [40 CFR 63.6640(a)]

- Operating and maintaining G006 according to the manufacture's emission related operation and maintenance instructions or; [40 CFR 63.6640(a), 40 CFR 63 Subpart ZZZZ Table 6 (9)(a)(i)]
- (2) The permittee shall develop and follow a maintenance plan which must provide to the extent practicable for the maintenance and operation of G006 in a manner consistent with good air pollution control practice of minimizing emissions. [40 CFR 63.6640(a), 40 CFR 63 Subpart ZZZZ Table 6-(9)(a)(ii)]

5. Recordkeeping Requirements

- a. The permittee shall, on a monthly basis, no later than 10 days after the first of each month, determine the hours of operation for G006 for the previous 12 months. The permittee shall keep records of this determination and provide such records to the Office of Air Resources upon request. [27.6.10(c), RI-PSD-6(E)(8)]
- b. The permittee must maintain the following records: [40 CFR 63.6655(a)]
 - A copy of each notification and report that was submitted to comply with 40 CFR 63 Subpart ZZZZ including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv). [40 CFR 63.6655(a)(1)]
 - (2) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(2)]
 - (3) Records of all required maintenance performed on the monitoring equipment. [40 CFR 63.6655(a)(4)]
 - (4) Records of actions taken during periods of malfunction to minimize emissions in accordance with Condition I.C.2.i of this permit including corrective actions to restore malfunctioning process and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)(5)]
 - (5) Records of the maintenance conducted on G006 in order to demonstrate that the permittee operated and maintained G006 and after-treatment control device (if any) according to your own maintenance plan. [40 CFR 63.6655(e)(2)]
- c. The permittee shall maintain all records in a form suitable and readily available for expeditious review according to §63.10(b)(1). [40 CFR 63.6660(a)]

- d. The permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record, as specified in §63.10(b)(1). [40 CFR 63.6660(b)]
- e. The permittee shall keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). [40 CFR 63.6660(c)]

6. **Reporting Requirements**

- a. The permittee shall notify the Office of Air Resources, in writing within 15 days, whenever the hours of operation for G006 exceeds 36 hours in any 12-month period. [RI-PSD-6(E)(9), 27.6.10(d)]
- b. The permittee shall notify the Office of Air Resources of any anticipated noncompliance with the terms of Section I.C. of this permit or any other applicable air pollution control rules or regulations. [RI-PSD-6(E)(4)]

7. Other Requirements

- a. To the extent consistent with the requirements in Section I.C. of this permit and applicable federal and state laws, the facility shall be operated in accordance with the representation of the facility in the Major Source permit application. [RI-PSD-6(G)(3)]
- b. The permittee is subject to the requirements of 40 CFR 63.1-15, Subpart A, "General Provisions" and 40 CFR 63, Subpart ZZZZ "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines". Compliance with all applicable provisions therein is required, unless otherwise stated in this permit. [40 CFR 63.6665]

D. <u>Facility Requirements</u>

1. Emission Limitations

a. Nitrogen oxides (as Nitrogen dioxide (NO₂))

The total quantity of nitrogen oxides discharged to the atmosphere from the entire facility shall not exceed 312,000 lbs. in any consecutive 12-month period. [RI-PSD-6(A)(3)(a)(1)]

2. **Operating Requirements**

a. The total heat input from natural gas combusted at the entire facility shall not exceed 25,413,189 million BTUs in any consecutive 12-month period. [RI-PSD-6(B)(7)]

3. Recordkeeping Requirements

- a. The permittee shall, on a monthly basis, no later than 10 days after the first of each month, determine the total quantity of nitrogen oxides discharged to the atmosphere from the entire facility for the previous 12 months. The permittee shall keep records of this determination and provide such records to the Office of Air Resources upon request. [RI-PSD-6(E)(6)]
- b. The permittee shall, on a monthly basis, no later than 10 days after the first of each month, determine the total heat input from natural gas combusted at the entire facility for the previous 12 months as follows:

 $HI = (Q \times GCV_g)/1,000,000$

Where:

- HI = Total Heat Input (MMBTUs)
- Q = Quantity of natural gas combusted at the entire facility in the previous 12 months in scf
- GCV_g = Gross calorific value of natural gas in BTU/scf as determined by a continuous on-line gas chromatograph on an hourly basis. [Letter dated March 14, 2013 from Reid P. Harvey of the USEPA to Edward Trump of Entergy Rhode Island State Energy, L.P.]

For periods of missing GCV_g data, the permittee shall use substitute data values in the calculations, as follows: [Letter dated March 14, 2013 from Reid P. Harvey of the USEPA to Edward Trump of Entergy Rhode Island State Energy, L.P.]

- (1) Provided that at least on valid GCV_g measurement is obtained in a given month, substitute, for each hour of the missing data period, the arithmetic average of the GCV_g values from the hour before and the hour after the missing data incident; or
- (2) In accordance with section 2.4.1 of Appendix D to 40 CFR Part 75, if no valid GCV_g values are obtained in a given month, substitute, for each hour of the missing data period, the maximum potential GCV_g value of 110,000 Btu per 100 scf, from Table D-6 in Appendix D to Part 75.

The permittee shall keep records of this determination and provide such records to the Office of Air Resources upon request. [RI-PSD-6(E)(11)]

4. **Reporting Requirements**

- a. The permittee shall notify the Office of Air Resources in writing within 15 days, whenever total quantity of nitrogen oxides discharged to the atmosphere from the entire facility exceeds 312,000 lbs. in any 12-month period. [RI-PSD-6(E)(7)]
- b. The permittee shall notify the Office of Air Resources in writing within 15 days, whenever the total heat input from natural gas combusted at the entire facility exceeds 25,413,189 million BTUs in any consecutive 12-month period. [RI-PSD-6(E)(13)]

B. <u>Annual Emissions Fee Payment</u>

The permittee shall pay an annual emissions fee as established in Air Pollution Control Regulation No. 28 "Operating Permit Fees". [29.6.8(d)]

C. <u>Permit Renewal and Expiration</u>

This permit is issued for a fixed term of 5 years. The permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least 12 months prior to the date of permit expiration. Upon receipt of a complete and timely application for renewal, this source may continue to operate subject to final action by the Office of Air Resources on the renewal application. In such an event, the permit shield in Condition II.AA of this permit shall extend beyond the original permit term until renewal. This protection shall cease to apply if, subsequent to a completeness determination, the applicant fails to submit by the deadline specified in writing by the Office of Air Resources any additional information identified as being needed to process the application. The application for renewal shall include the current permit number, description of permit revisions and off-permit changes that occurred during the permit term, and any applicable requirements that were promulgated and not incorporated into the permit during the permit term. [29.6.8(a), 29.4.2(c), 29.4.6]

D. <u>Transfer of Ownership or Operation</u>

This permit is nontransferable by the permittee. Future owners and operators must obtain a new operating permit from the Office of Air Resources. A change in ownership or operational control of this source is treated as an administrative permit amendment if no other change in this permit is necessary and provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Office of Air Resources. [29.10.1(a)(4)]

E. <u>Property Rights</u>

This permit does not convey any property rights of any sort, or any exclusive privilege. [29.6.8(c)(4)]

F. <u>Submissions</u>

1. Reports, test data, monitoring data, notifications, and requests for renewal shall be submitted to :

RIDEM - Office Air Resources Compliance Assurance Section 235 Promenade St. Providence, RI 02908

2. Any records, compliance certifications and monitoring data required by the provisions of this permit to be submitted to USEPA shall be sent to:

USEPA Region I Office of Environmental Stewardship Director, Air Compliance Program Attn: Air Compliance Clerk 5 Post Office Square Suite 100 Boston, MA 02109-3912

3. Any document submitted shall be certified as being true, accurate, and complete by a responsible official. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. [29.6.8(e)]

G. Inspection and Entry

- 1. Employees of the Office of Air Resources and its authorized representatives shall be allowed to enter this facility at all reasonable times for the purpose of:
 - a. having access to and copying at reasonable times any records that must be kept under the conditions of this permit;
 - b. inspecting at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - c. sampling or monitoring, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or other applicable requirements.[RIGL 23-23-5(7), 29.6.8(f)(1-4), RI-PSD-6(G)(4)]

Nothing in this condition shall limit the ability of the USEPA to inspect or enter the premises of the permittee under Section 114 or other provisions of the Clean Air Act.

H. <u>Compliance</u>

- 1. The permittee must comply with all conditions of this permit. Any noncompliance with a federally enforceable permit condition constitutes a violation of the Clean Air Act and is grounds for enforcement action, for permit termination, revocation and reissuance or modification, or for denial of a permit renewal application. Any noncompliance with a permit condition designated as state only enforceable constitutes a violation of state rules only and is grounds for enforcement action, for permit termination, revocation and reissuance or modification. [29.6.8(c)(1)]
- 2. For each unit at the facility for which an applicable requirement becomes effective during the permit term, the permittee shall meet such requirements on a timely basis unless a more detailed schedule is expressly required by the applicable requirement. [29.6.5(a)]
- 3. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. [29.6.8(c)(2)]

I. <u>Excess Emissions Due to an Emergency</u>

As the term is used in this condition an "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of this source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes this source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. [29.6.11(b)]

Technology-based emission limits are those established on the basis of emission reductions achievable with various control measures or process changes (e.g., a new source performance standard) rather than those established to attain a health based air quality standard.

The permittee may seek to establish that noncompliance with a technology-based emission limitation under this permit was due to an emergency. To do so, the permittee shall demonstrate the affirmative defense of emergency through properly signed, contemporaneous operating logs, or other relevant evidence that: [29.6.11(a) & 29.6.11(c)]

- 1. an emergency occurred and that the permittee can identify the cause(s) of the emergency; [29.6.11(c)(1)]
- 2. the permitted facility was at the time being properly operated; [29.6.11(c)(2)]
- 3. during the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards, or other requirements in this permit; and [29.6.11(c)(3)]

4. the permittee submitted notice of the emergency to the Office of Air Resources within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This notice fulfills the requirements of Condition II.CC.3 of this permit. [29.6.11(c)(4)]

The permittee shall have the burden of proof in seeking to establish the occurrence of an emergency. [29.6.11(d)]

J. <u>Duty to Provide Information</u>

The permittee shall furnish to the Office of Air Resources, within a reasonable time, any pertinent information that the Office of Air Resources may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Office of Air Resources copies of records that the permittee is required to keep by this permit, or for information claimed to be confidential, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality. [29.6.8(c)(5)]

K. <u>Duty to Supplement</u>

The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the Office of Air Resources. The permittee shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete renewal application was submitted but prior to release of a draft permit. [29.5.4]

L. <u>Reopening for Cause</u>

The Office of Air Resources will reopen and revise this permit as necessary to remedy deficiencies in the following circumstances:

- 1. Additional requirements under the Clean Air Act become applicable to a major source 3 or more years prior to the expiration date of this permit. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit, unless this permit or any of its terms and conditions has been extended. [29.6.13(a)]
- 2. The Office of Air Resources or the Administrator determines that this permit contains a material mistake or inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit. [29.6.13(c)]
- 3. The Office of Air Resources or the Administrator determines that the permit must be revised or revoked to assure compliance with the applicable requirements. [29.6.13(d)]

Reopenings shall not be initiated before a notice of intent to reopen is provided to the permittee by the Office of Air Resources at least 30 days in advance of the date that this permit is to be reopened, except that the Office of Air Resources may provide a shorter time period (but not less than 5 days) in the case of an emergency. [29.9.5(b)]

Proceedings to reopen and issue this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable. [29.9.5(a)]

M. <u>Severability Clause</u>

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. [29.6.8(b)]

N. <u>Off-Permit Changes</u>

- 1. The permittee is allowed to make certain changes that are not addressed or prohibited by this permit without a permit revision, provided that the following conditions are met: [29.11.2(a)]
 - a. Each such change shall not violate any term or condition of this permit. [29.11.2(b)]
 - b. Each change shall comply with all applicable requirements. [29.11.2(b)]
 - c. Changes under this provision may not include changes or activities subject to any requirement under Title IV or modifications under any provision of Title I of the Clean Air Act. [29.11.2(a)]
 - d. Before the permit change is made, the permittee must provide contemporaneous written notice to the Office of Air Resources and the USEPA Region I, except for changes that qualify as insignificant activities in Appendix A of APC Regulation No. 29. This notice shall describe each change, including the date, and change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change. [29.11.2(c)]
 - e. The permit shield does not apply to changes made under this provision. [29.11.2(d)]
 - f. The permittee shall keep a record describing changes made at the stationary source that result in emissions of a regulated air pollutant subject to an

applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes, including any other data necessary to show compliance with applicable ambient air quality standards. The record shall reside at the permittee's facility. [29.11.2(e)]

- 2. Changes made pursuant to this provision shall not be exempt from the requirement to obtain a minor source permit pursuant to the requirements of Air Pollution Control Regulation No. 9, if applicable. [29.11.2(a)]
- 3. Changes made pursuant to this provision shall be incorporated into this permit at the time of renewal. [29.11.2(f)]

O. <u>Section 502(b)(10) Changes</u>

- 1. The permittee is allowed to make changes within this permitted facility that contravene the specific terms of this permit without applying for a permit revision, provided the changes do not exceed the emissions allowable under this permit, whether expressed therein as a rate of emissions or in terms of total emissions and are not Title I modifications. This class of changes does <u>not</u> include:
 - a. changes that would violate applicable requirements; or
 - b. changes to federally-enforceable permit terms or conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements. [29.11.1(a), 29.1.36]
- 2. The permittee shall provide written notice to the Office of Air Resources and the USEPA Region I of any change made under this provision. The notice must be received by the Office of Air Resources no later than fourteen (14) days in advance of the proposed changes. The notice shall include information describing the nature of the change, the effect of the change on the emission of any air contaminant, the scheduled completion date of the planned change and identify any permit terms or conditions that are no longer applicable as a result of the change. The permittee shall attach each notice to its copy of this permit. [29.11.1(a)(1), 29.11.1(a)(2)]
- 3. The permittee shall be allowed to make such change proposed in its notice the day following the last day of the advance notice described in paragraph 2 if the Office of Air Resources has not responded nor objected to the proposed change on or before that day. [29.11.1(b)]
- 4. Any permit shield provided in this permit does not apply to changes made under this provision. If subsequent changes cause the permittee's operations and emissions to revert to those anticipated in this permit, the permittee resumes compliance with the terms and conditions of the permit, and has provided the Office of Air Resources and USEPA with a minimum of fourteen (14) days advance notice of such changes in accordance with the provisions of paragraph 2, the permit shield shall be reinstated in accordance with terms and conditions stated in this permit. [29.11.1(c)]

5. Changes made pursuant to this provision shall be incorporated into the operating permit at the time of renewal. [29.11.1(d)]

P. <u>Emissions Trading</u>

No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit. [29.6.6(a)]

Q. Emission of Air Contaminants Detrimental to Person or Property

The permittee shall not emit any air contaminant which either alone or in connection with other emissions, by reason of their concentration or duration, may be injurious to human, plant or animal life, or cause damage to property or which unreasonably interferes with the enjoyment of life or property. [7.2]

R. <u>Odors</u>

- 1. The permittee shall not emit or cause to be emitted into the atmosphere any air contaminant or combination of air contaminants which creates an objectionable odor beyond the property line of this facility. [17.2]
- 2. A staff member of the Office of Air Resources shall determine by personal observation if an odor is objectionable, taking into account its nature, concentration, location, duration and source. [17.3]

S. <u>Visible Emissions</u>

- 1. Except as may be specified in other provisions of this permit, the permittee shall not emit into the atmosphere, from any emission unit, any air contaminant, for a period or periods aggregating more than three minutes in any one hour, which is greater than or equal to 20 percent opacity. [1.2] Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this permit. [1.4]
- 2. Tests for determining compliance with the opacity limitations specified in this permit shall be performed per 40 CFR 60, Appendix A, Method 9. Additionally, all observers must qualify as per 40 CFR 60, Appendix A, Method 9. [1.3.1, 1.3.2]

T. <u>Open Fires</u>

It shall be unlawful for the permittee to burn any material in an open fire, except as provided in APC Regulation No. 4, Section 4.3. [4.2]

U. <u>Construction Permits</u>

It shall be unlawful for the permittee to construct, install, modify or cause the construction, installation or modification of any stationary source subject to the provisions of APC

Regulation No. 9 without obtaining either a minor source permit or a major source permit from the Director. [9.2.1]

V. <u>Sulfur in Fuel</u>

- 1. Unless the Director determine, pursuant to subsection 8.7 of RI Air Pollution Control Regulation No. 8, that a shortage of fuel oil meeting the requirements of this permit, the permittee shall not use or store fuel oil having a sulfur content in excess of the following, except for use with motor vehicles: [8.2.1]
 - a. Through June 30, 2018 all distillate or biodiesel fuel oil burned at the facility shall contain no more than 0.05 percent sulfur by weight (500 ppm).
 - b. On or after July 1, 2018 all distillate or biodiesel fuel oil burned at the facility shall contain no more than 0.0015 percent sulfur by weight (15 ppm).
- 2. Compliance with the sulfur in the fuel limitations contained in this permit shall be determined by procedures referenced below or deemed equivalent by the Director. Such procedures shall include but not be limited to any of the following: [8.4.1]
 - a. Emission testing conducted by the permittee according to the Reference Methods of Appendix A to 40 CFR 60; or [8.4.1.a]
 - b. For each shipment of distillate or biodiesel fuel oil, the permittee shall obtain a certification from the fuel supplier which contains: [8.4.1.b]
 - (1) the name of the supplier and the date the fuel oil was received from the supplier; and, [8.4.1.b(1)]
 - (2) the sulfur content of the fuel oil and the ASTM method used to determine the sulfur content of the fuel oil; and, [8.4.1.b(2)]
 - (3) the date and location of the fuel oil when the sample was drawn for analysis to determine the sulfur content of the fuel oil, specifically including where the fuel oil was sampled; or [8.4.1.b(3)]
 - c. Laboratory analysis of fuel oils by the permittee or by the supplier. Sampling and analysis shall be conducted after each new shipment of fuel oil is received by the permittee. Samples shall be collected from the fuel tank immediately after the fuel tank is filled and before any fuel oil is combusted. All fuel oil must be sampled and analyzed in accordance with applicable ASTM methods or another method which has the prior approval of or are required by the Director. [8.4.1.c]
 - d. A continuous monitoring system for the measurement of sulfur dioxide that meets the performance specifications in Appendix B of 40 CFR 60. The monitoring equipment shall also be installed, calibrated, operated, and

maintained in accordance with the procedures in Appendix B of 40 CFR 60 and the minimum specifications in Appendix P of 40 CFR 51. [8.4.1.d]

- 3. Copies of the fuel oil analysis sheets shall be maintained at the facility and be made accessible for review by the Office of Air Resources or its authorized representatives and USEPA. These records shall include a certified statement, signed by a responsible official, that the records represent all of the fuel combusted during each quarter. [8.5.1, 27.6.7]
- 4. The Director may require, under his supervision, the collection of fossil fuel samples for the purpose of determining compliance with the sulfur limitations in this permit. [8.4.3]
- 5. Fuel oil stored at the facility that met the applicable requirements of subsection II.V.1 at the time the fuel oil was received for storage at the facility may be stored for use after the effective date in II.V.1. [8.3.2]

W. <u>Air Pollution Episodes</u>

Conditions justifying the proclamation of an air pollution alert, air pollution warning or air pollution emergency shall be deemed to exist whenever the Director determines that the accumulation of air pollutants in any place is attaining or has attained levels which could, if such levels are sustained or exceeded, lead to a substantial threat to the health of persons. If the governor declares an air pollution alert, air pollution warning or air pollution emergency, the permittee shall comply with the applicable requirements contained in APC Regulation No. 10. [10.1]

X. <u>Fugitive Dust</u>

The permittee shall not cause or permit any materials, including but not limited to sand, gravel, soil, aggregate and any other organic or inorganic solid matter capable of releasing dust, to be handled, transported, mined, quarried, stored or otherwise utilized in any way so as to cause airborne particulate matter to travel beyond the property line of the facility without taking adequate precautions to prevent particulate matter from becoming airborne. Such precaution shall be in accordance with good industrial practice as determined by the Director and/or shall be other reasonable fugitive dust prevention measures as determined by the Director. [5.3]

Y. <u>Adhesives and Sealants</u>

Except as provided in subsections 44.2.2-44.2.4 of Air Pollution Control Regulation No. 44, the permittee shall comply with all applicable provisions of Air Pollution Control Regulation No. 44 if the permittee sells, offers for sale supplies or manufactures any adhesive, sealant, adhesive primer or sealant primer for use within the State of Rhode Island or uses or solicits the use of any adhesive, sealant, adhesive primer or sealant primer for use within the State of Rhode Island. [44.2.1]

Z. <u>Architectural and Industrial Maintenance Coatings</u>

Except as provided in subsection 33.2.2 of Air Pollution Control Regulation No. 33, the permittee shall comply with all applicable provisions of Air Pollution Control Regulation No. 33 if the permittee sells, offers for sale, or supplies or manufactures an architectural coating for use within the State of Rhode Island or applies an architectural coating for compensation, or solicits the application of any architectural coating within the State of Rhode Island. [33.2.1]

Z. <u>Compliance Certifications</u>

- 1. The permittee shall submit a certification of compliance with permit terms and conditions annually. [29.6.5(c)(1)]
- 2. The certification shall describe the following:
 - a. the permit term or condition that is the basis of the certification; [29.6.5(c)(3)a]
 - b. the current compliance status; [29.6.5(c)(3)b]
 - c. whether compliance was continuous or intermittent; and [29.6.5(c)(3)c]
 - d. the methods used for determining compliance, currently and over the reporting period. [29.6.5(c)(3)d]
- 3. All compliance certifications shall be submitted to the Office of Air Resources and to the USEPA Region I. It shall be submitted within 60 days following the end of the reporting period which is the calendar year unless otherwise specified. [29.6.5(c)(4)]
- 4. All compliance certifications shall be certified as being true, accurate, and complete by a responsible corporate official. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. [29.6.8(e)]

AA. <u>Permit Shield</u>

- 1. Compliance with the terms and conditions of this permit shall be deemed compliance with all requirements applicable to the source in the following: RI-PSD-6, RI APC Regulation Nos: 1, 4, 5, 7, 8, 9, 10, 14, 16, 17, 27, 28, 29, 33, 36, 44, 46 and 47, and Federal Requirements: 40 CFR Part 60 Subparts Da, GG and A, 40 CFR Part 63 Subparts ZZZZ and A. [29.6.12(a)(1)]
- 2. The Office of Air Resources has determined that units G001, G002, G006 and P005 are not subject to the following regulations: RI APC Regulation Nos. 3, 6, 11, 12, 13, 15, 19, 20, 21, 22, 23, 24, 25, 26, 30, 31, 32, 35, 39, 43. [29.6.12(a)(2)]
- 3. Nothing in this permit shall alter or affect the following:
 - a. the provisions of Section 303 of the Clean Air Act, including the authority of USEPA under that Section. [29.6.12(c)(1)]
 - b. the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance. [29.6.12(c)(2)]
 - c. the applicable requirements of the acid rain program consistent with Section 408 of the Clean Air Act. [29.6.12(c)(3)]
 - d. the ability of the EPA to obtain information under Section 114 of the Act. [29.6.12(c)(4)]
- 4. If it is determined that this operating permit was issued based on inaccurate or incomplete information provided by the permittee, this permit shield shall be void as to the portions of this permit which are affected, directly or indirectly, by the inaccurate or incomplete information. [29.6.12(d)]

BB. <u>Recordkeeping</u>

- 1. The permittee shall, at the request of the Director, maintain records of and provide data on operational processes, fuel usage, raw materials, stack dimensions, exhaust gas flow rates and temperatures, emissions of air contaminants, steam or hot water generator capacities, types of equipment producing air contaminants and air pollution control systems or other data that may be necessary to determine if the facility is in compliance with air pollution control regulations. [14.2.1]
- 2. All records and supporting information required by this permit shall be maintained at the permittee's 24 Shun Pike facility for a period of at least 5 years from the date of sample monitoring, measurement, report or application, and shall be made available to representatives of the Office of Air Resources and USEPA upon request. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [14.2.1, 29.6.4(a)(2), 40 CFR 60.7(f), RI-PSD-6(E)(21):(N)(13)]

- 3. The permittee shall keep records of required monitoring information that include the following:
 - a. The date, place and time of sampling or measurements; [29.6.4(a)(1)]
 - b. The date(s) analyses were performed; [29.6.4(a)(1)]
 - c. The company or entity that performed the analyses; [29.6.4(a)(1)]
 - d. The analytical techniques or methods used; [29.6.4(a)(1)]
 - e. The results of such analyses; and [29.6.4(a)(1)]
 - f. The operating conditions as existing at the time of sampling or measurement. [29.6.4(a)(1)]

CC. <u>Reporting</u>

- 1. The information recorded by the permittee pursuant to Condition II.BB.1 of this permit shall be summarized and reported at least annually to the Director. It shall be submitted by April 15th unless otherwise specified. [14.2.2] Information submitted pursuant to this condition will be correlated with applicable emission limitations and other applicable emissions information and will be available for public inspection. [14.2.3]
- 2. The permittee shall submit reports of any required monitoring for each semi annual period ending 30 June and 31 December of every calendar year. These reports shall be due to the Office of Air Resources no later than forty-five (45) days after the end of the reporting period. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with condition II.Z.4. [29.6.4(b)(1)]
- 3. Deviations from permit conditions, including those attributable to upset conditions as defined in this permit, shall be reported, in writing, within five (5) business days of the deviation, to the Office of Air Resources. A copy of any such report shall be sent to the USEPA Region I. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken. Each report must be certified by a responsible official consistent with Condition II.Z.4 of this permit. [29.6.4(b)(2)]
- 4. The Office of Air Resources shall be notified in writing of any planned physical change or operational change to the emissions units and control devices identified in this permit. Such notification shall include information describing the nature of the change, information describing the effect of the change on the emissions of air contaminants and the scheduled completion date of the planned change. Any change which may result in an increased emission rate of any air contaminant shall be subject to approval of the Office of Air Resources. [RI-PSD-6(E)(18), 40 CFR 60.7(a)(4)]

DD. <u>Credible Evidence</u>

For the purpose of submitting compliance certifications or establishing whether or not the permittee has violated or is in violation of any provision of this permit, the methods used in this permit shall be used, as applicable. However, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether the permittee would have been in compliance with applicable requirements if the appropriate performance or compliance test procedures or methods had been performed. [40 CFR 51.212c, 52.12c, 52.33a]

EE. <u>Emission Statements</u>

- 1. The permittee shall submit, annually, an emission statement which includes information for both VOC and NO_x if facility wide actual emissions are 25 tons per year of either pollutant. Emission statements shall be submitted to the Director on April 15th of each year unless otherwise specified. The permittee may apply to the Office of Air Resources to be allowed to discontinue submitting annual emission statements if actual emissions at the facility decrease to below 10 tons per year as a result of a permanent process change. [14.3.1] The permittee shall submit this emission statement in a format approved by the Office of Air Resources. The emission statement shall contain the following information: [14.3.2]
 - a. A certification that the information contained in the emission statement is accurate and complete to the best knowledge of the certifying individual.
 - b. The full name, title, signature, date of signature, and telephone number of the certifying individual.
 - c. Facility identification information, including the full name, physical location, mailing address, latitude, longitude, and four digit SIC code(s).
 - d. Process data pertaining to each process emitting VOC and/or NO_x , including:
 - (1) Annual and typical ozone season daily fuel use,
 - (2) Annual and typical ozone season daily process rate(s), and
 - (3) Process throughput while air pollution control equipment was not in operation.
 - e. Operating data pertaining to each process emitting VOC and/or NO_x during the reporting year, including:
 - (1) Percentage annual throughput,
 - (2) Average hours of operation per day during the reporting year and on a typical ozone season day,
 - (3) Average number of days of operation per week during the reporting year and during a typical ozone season week, and
 - (4) Weeks of operation during the reporting year and during the peak ozone season.

- f. Control equipment information, including:
 - (1) Specific primary and secondary control equipment for each process emitting VOC and/or NO_x,
 - (2) Current overall control efficiency for each piece of control equipment (indicated by percent capture and percent destruction or removal), and
 - (3) Control equipment downtime during the reporting year and during the peak ozone season.
- g. Emissions information, including:
 - (1) Actual annual and typical ozone season daily emissions of VOC and NO_x for each process. Emissions should be reported in tons per year and in pounds per day.
 - (2) A description of the emission calculation method and, if applicable, emission factor(s) used, and
 - (3) The calendar year for which emissions are reported.
- h. Any additional information required by the Director to document the facility's emission statements.

FF. <u>Miscellaneous Conditions</u>

- 1. This permit may be modified, revoked, reopened, reissued or terminated for cause. The filing of a request, by the permittee, for a permit modification, revocation and reissuance or termination or of a notification of planned changes or anticipated noncompliance does not release the permittee from the conditions of this permit. [29.6.8(c)(3)]
- 2. Any application for a permit revision need only submit information related to the proposed change. [29.4.3(c)]
- 3. Terms not otherwise defined in this permit shall have the meaning given to such terms in 40 CFR 60.2, the Clean Air Act as amended in 1990 or the referenced regulation as applicable.
- 4. Where more than one condition in this permit applies to an emission unit and/or the entire facility, the most stringent condition shall apply.

A. <u>CO2 Budget Trading Program – (Not Federally Enforceable)</u>

The following requirements are applicable to:

CO ₂ Budget Source:	Rhode Island State Energy Center, L.P. (ORIS Code 55107)
CO ₂ Budget Unit:	Unit ID RI-CT-1 (Emission unit G001)
	Unit ID RI-CT-2 (Emission unit G002)

1. Carbon Dioxide Requirement

- a. Starting on January 1, 2009 the permittee shall hold CO_2 allowances available for compliance deductions under Condition III.A.7 of this permit, as of the CO_2 allowance transfer deadline, in the source's compliance account in an amount not less than the total CO_2 emissions for the control period from all CO_2 budget units at the source, less the CO_2 allowances deducted to meet the requirements with respect to the previous interim control periods, as determined in accordance with the provisions of Air Pollution Control (APC) Regulation No. 46 sections 46.8, 46.9 and 46.10. [46.3.1(a), 46.3.1(e)]
- b. The permittee of each CO_2 budget source and each CO_2 budget unit at the source shall hold CO_2 allowances available for compliance deductions under Condition III.A.7 of this permit, as of CO_2 allowance transfer deadline, in the source's compliance account in an amount not less than the total CO_2 emissions for the interim control period from all CO_2 budget units at the source multiplied by 0.50, as determined in accordance with APC Regulation 46 sections 46.8, 46.9 and 46.10. [46.3.1(b)]
- c. Each ton of CO₂ emitted in excess of the CO₂ budget emissions limitation for a control period shall constitute a separate violation of APC Regulation No. 46 and applicable State law. [46.3.1(c)]
- d. Each ton of excess interim emissions shall constitute a separate violation of this APC Regulation 46 and applicable state law. [46.3.1(d)]
- e. CO₂ allowances shall be held in, deducted from, or transferred among CO₂ Allowance Tracking System accounts in accordance with APC Regulation No. 46, sections 46.4, 46.7 and 46.8. [46.3.1(f), 46.7.1, 46.7.2, 46.7.3, 46.8.1, 46.8.2, 46.8.3, 46.8.4, 46.8.7, 46.8.8]
- f. A CO₂ allowance shall not be deducted, in order to comply with the requirements in condition III.A.1 above, for a control period or interim control period that ends prior to the year for which the CO₂ allowance was allocated. A CO₂ offset allowance shall not be deducted, in order to comply with the requirements in subsection III.A.1, beyond the applicable percent limitations set out in subsection III.A.7.a(3). [46.3.1(g)]

- g. A CO₂ allowance under the CO₂ Budget Trading Program is a limited authorization by the Department or a participating state to emit one ton of CO₂ in accordance with the CO₂ Budget Trading Program. No provision of the CO₂ Budget Trading Program, the CO₂ budget permit application, the CO₂ budget permit or any provision of law shall be construed to limit the authority of the Department or a participating state to terminate or limit such authorization. [46.3.1(h)]
- h. A CO₂ allowance under the CO₂ Budget Trading Program does not constitute a property right. [46.3.1(i)]

2. Monitoring Requirements

- The owners and operators, and to the extent applicable, the CO₂ authorized a. account representative of Rhode Island State Energy Center, L.P., Inc. (each CO₂ budget source and each CO₂ budget unit at the source) shall comply with the monitoring requirements of APC Regulation No. 46, sections 46.9 and all applicable sections of 40 CFR part 75. Where referenced in sections 46.9 and 46.10, the monitoring requirements of 40 CFR Part 75 shall be adhered to in a manner consistent with the purpose of monitoring and reporting CO₂ mass emissions pursuant to Air Pollution Control Regulation No. 46. For purposes of complying with such requirements, the definitions in section 46.1 of APC Regulation No. 46 and in 40 CFR 72.2 shall apply, and the terms "affected unit," "designated representative," and "continuous emissions monitoring system" (or "CEMS") in 40 CFR part 75 shall be replaced by the terms "CO₂ budget unit," "CO₂ authorized account representative," and "continuous emissions monitoring system" (or "CEMS"), respectively, as defined in subsection 46.1. [46.3.4, 46.9.1(a), 46.9.2, 46.9.3, 46.9.4, 46.9.5]
- b. The emission measurements recorded and reported in accordance with section 46.9 of APC Regulation No. 46 shall be used to determine compliance by the unit with the CO₂ requirements of III.A.1. [46.9.1(b)]

3. Excess Emissions

- a. If a CO₂ budget source has excess emissions in any control period, or excess interim emissions for any interim control period the permittee shall:
 - (1) Forfeit the CO₂ allowances required for deduction under subsection III.A.7.d(1); provided CO₂ offset allowances may not be used to cover any part of such excess emissions; and

(2) Pay any fine, penalty, or assessment or comply with any other remedy imposed under subsection III.A.7.d(2). [46.3.2(a)(1-2)]

4. Recordkeeping and Reporting Requirements

- a. The CO₂ authorized account representative shall comply with all recordkeeping and reporting requirements in this section, the applicable recordkeeping and reporting requirements under 40 CFR 75.73 and with the requirements of subsection 46.5.1(e) of APC Regulation No. 46. [46.10.1(a), 46.10.7(f)(1)]
- b. The permittee shall keep on site at the source each of the following documents for a period of 10 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 10 years, in writing by the Department. [46.3.3(a)]
 - (1) The account certificate of representation for the CO_2 authorized account representative for the source and each CO_2 budget unit at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with the provisions of APC Regulation No. 46, section 46.5.5, provided that the certificate and documents shall be retained on site at the source beyond such 10-year period until such documents are superseded because of the submission of a new account certificate of representation changing the CO_2 authorized account representative. [46.3.3(a)(1)]
 - (2) All emissions monitoring information, in accordance with APC Regulation No. 46, sections 46.9, 46.10 and 40 CFR 75.57. [46.3.3(a)(2)]
 - (3) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CO₂ Budget Trading Program. [46.3.3(a)(3)]
 - (4) Copies of all documents used to complete a CO₂ budget permit application and any other submission under the CO₂ Budget Trading Program or to demonstrate compliance with the requirements of the CO₂ Budget Trading Program. [46.3.3(a)(4)]
- c. The CO₂ authorized account representative of a CO₂ budget source and each CO₂ budget unit at the source shall submit the reports and compliance certifications required under the CO₂ Budget Trading Program, including those in APC Regulation No. 46, sections 46.9, 46.10 and 46.11.[46.3.3(b)]
- d. The CO₂ authorized account representative shall submit an application to the Department within 45 days after completing all CO₂ monitoring system initial certification or recertification tests required under subsection 46.9.3

of APC Regulation No. 46 including the information required under 40 CFR 75.63 and 40 CFR 75.53(e) and (f). [46.10.3(a)]

Compliance Certification Report

- e. For each control period, the permittee shall submit to the Department by the March 1 following the relevant control period, a compliance certification report. [46.11.1(a)]
- f. The CO_2 authorized account representative shall include in the compliance certification report under paragraph e. of this subsection the following elements, in a format prescribed by the Department concerning each unit at the source and subject to the CO_2 budget emissions limitation for the control period covered by the report. A compliance certification report is not required as part of the compliance obligation during an interim control period:
 - (1) Identification of the source and each CO_2 budget unit at the source; [46.11.1(b)(1)]
 - (2) At the CO₂ authorized account representative's option, the serial numbers of the CO₂ allowances that are to be deducted from the source's compliance account under condition III.A.7 for the control period, including the serial numbers of any CO₂ offset allowances that are to be deducted subject to the limitations of condition III.A.7.a(3); and [46.11.1(b)(2)]
 - (3) The compliance certification under paragraph g of this subsection. [46.11.1(b)(3)]
- g. In the compliance certification report under paragraph e of this subsection, the CO₂ authorized account representative shall certify, based on reasonable inquiry of those persons with primary responsibility for operating the source and the CO₂ budget units at the source in compliance with the CO₂ Budget Trading Program, whether the source and each CO₂ budget unit for which the compliance certification is submitted was operated during the calendar years covered by the report in compliance with the requirements of the CO₂ Budget Trading Program, applicable to the unit, including:
 - (1) Whether the source was operated in compliance with the CO_2 requirements of III.A.1; [46.11.1(c)(1)]
 - (2) Whether the monitoring plan applicable to each unit at the source has been maintained to reflect the actual operation and monitoring of the unit, and contains all information necessary to attribute CO_2 emissions to the unit, in accordance with sections 46.9 and 46.10 of APC Regulation No. 46; [46.11.1(c)(2)]

- (3) Whether all the CO₂ emissions from the units at the source were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including whether conditional data were reported in the quarterly reports in accordance with sections 46.9 and 46.10 of APC Regulation No. 46. If conditional data were reported, the permittee shall indicate whether the status of all conditional data has been resolved and all necessary quarterly report resubmissions have been made; [46.11.1(c)(3)]
- (4) Whether the facts that form the basis for certification under section 46.9 and 46.10 of APC Regulation No. 46 of each monitor at each unit at the source, or for using an accepted monitoring method or alternative monitoring method approved under sections 46.9 and 46.10 of APC Regulation No. 46, if any, have changed; and [46.11.1(c)(4)]
- (5) If a change is required to be reported under paragraph g(4) of this subsection, specify the nature of the change, the reason for the change, when the change occurred, and how the unit's compliance status was determined subsequent to the change, including what method was used to determine emissions when a change mandated the need for monitor recertification. [46.11.1(c)(5)]

Quarterly Reports

- h. The CO₂ authorized account representative shall report the CO₂ mass emissions data for the CO₂ budget unit, in an electronic format prescribed by the Administrator, unless otherwise prescribed by the Department, for each calendar quarter beginning with the calendar quarter covering January 1, 2009 through March 31, 2009. [46.10.4(a)(1)]
- i. The CO₂ authorized account representative shall submit each quarterly report to the Department or its agent within 30 days following the end of the calendar quarter covered by the report. Quarterly reports shall be submitted in the manner specified in Subpart H of 40 CFR part 75 and 40 CFR 75.64. Quarterly reports shall be submitted for each CO₂ budget unit (or group of units using a common stack), and shall include all of the data and information required in Subpart G of 40 CFR part 75, except for opacity, NO_x and SO₂ provisions. [46.10.4(b)]
- j. Compliance Certification. The CO₂ authorized account representative shall submit to the Department or its agent a compliance certification in support of each quarterly report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The certification shall state that: [46.10.4(c)]
 - (1) The monitoring data submitted were recorded in accordance with the applicable requirements of sections 46.9 and 46.10 of APC

Regulation No. 46 and 40 CFR part 75, including the quality assurance procedures and specifications; [46.10.4(c)(1)]

(2) The CO₂ concentration values substituted for missing data under Subpart D of 40 CFR part 75 do not systematically underestimate CO₂ emissions. [46.10.4(c)(3)]

Output Data

- k. Ongoing QA/QC. The following ongoing quality assurance/quality control activities must be performed in order to maintain the output system:
 - (1) Billing meters. In the case where billing meters are used to determine output, no QA/QC activities beyond what are already performed are required. [46.10.7(e)(1)]
 - (2)Non-billing meters. Certain types of equipment such as potential transformers, current transformers, nozzle and venture type meters, and the primary element of an orifice plate only require an initial certification of calibration and do not require periodic recalibration unless the equipment is physically changed. However, the pressure and temperature transmitters accompanying an orifice plate will require periodic retesting. For such pressure and temperature transmitters, and other types of equipment, either recalibrate or reverify the meter accuracy at least once every two years (i.e., every eight calendar quarters), unless a consensus standard allows for less frequent calibrations or accuracy tests. For non-billing meters, the output monitoring system must either meet an accuracy of within 10% of the reference value, or each component monitor for the output system must meet an accuracy of within 3% of the full scale value, whichever is less stringent. If testing a piece of output measurement equipment shows that the output readings are not accurate to within 3.0 percent of the full scale value, then the equipment should be repaired or replaced to meet that requirement. [46.10.7(e)(2)]
 - (3) Out-of-control periods. If testing a piece of output measurement equipment shows that the output readings are not accurate to the certification value, data remain invalid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes the accuracy test. All invalid data shall be replaced by either zero or an output value that is likely to be lower than a measured value and that is approved as part of the monitoring plan required under subsection 46.10.7(c) of APC Regulation No. 46. [46.10.7(e)(3)]
- 1. The permittee shall retain data used to monitor, determine, or calculate net generation for ten years from the date reported. [46.10.7(f)(2)]

m. Annual reports. The CO_2 authorized account representative shall submit annual output reports, as follows. The data must be sent both electronically and in hardcopy by March 1 for the immediately preceding calendar year to the Department or its agent. The annual report shall include the annual total unit level MWh, the annual total useful thermal energy and a certification statement from the CO_2 authorized account representative stating the following:

> "I am authorized to make this submission on behalf of the owners and operators of the CO₂ budget sources or CO₂ budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment." [46.10.7(f)(3)]

5. Liability

- a. No permit revision shall excuse any violation of the requirements of the CO₂ Budget Trading Program that occurs prior to the date that the revision takes effect. [46.3.5(a)]
- b. Any provision of the CO_2 Budget Trading Program that applies to a CO_2 budget source (including a provision applicable to the CO_2 authorized account representative of a CO_2 budget source) shall also apply to the owners and operators of such source and of the CO_2 budget units at the source. [46.3.5(b)]
- c. Any provision of the CO_2 Budget Trading Program that applies to a CO_2 budget unit (including a provision applicable to the CO_2 authorized account representative of a CO_2 budget unit) shall also apply to the owners and operators of such unit. [46.3.5(c)]
- d. Any person who negligently, willingly or knowingly violates any requirement or prohibition of the CO₂ Budget Trading Program or a CO₂ budget permit shall be subject to enforcement pursuant to applicable law.[46.3.5(d)]
- e. Any person who negligently, willingly or knowingly makes a false material statement in any record, submission, or report under the CO₂ Budget Trading Program shall be subject to criminal enforcement pursuant to applicable law. [46.3.5(e)]

f. Each CO_2 budget source and each CO_2 budget unit shall meet the requirements of the CO_2 Budget Trading Program. [46.3.5(f)]

6. Effect on other authorities

a. No provision of the CO₂ Budget Trading Program, a CO₂ budget permit application, or a CO₂ budget permit, shall be construed as exempting or excluding the owners and operators and, to the extent applicable, the CO₂ authorized account representative of a CO₂ budget source or CO₂ budget unit from compliance with any other provision of any Air Pollution Control Regulation, the Rhode Island State Implementation Plan, a federally enforceable permit, or the Clean Air Act. [46.3.6]

7. Compliance

- a. Allowances available for compliance deduction. CO₂ allowances that meet the following criteria are available to be deducted in order for a CO₂ budget source to comply with the CO₂ requirements in subsection III.A.1 for a control period or an interim control period.
 - (1) The CO₂ allowances, other than CO₂ offset allowances, are of allocation years that fall within a prior control period, the same control period or the same interim control period for which the allowances will be deducted. [46.8.5(a)(1)]
 - (2) The CO₂ allowances are held in the CO₂ budget source's compliance account as of the CO₂ allowance transfer deadline for that control period or interim control period are transferred into the compliance account by a CO₂ allowance transfer correctly submitted for recordation under APC Regulation No. 46, subsection 46.7.1 by the CO₂ allowance transfer deadline for that control period or interim control period. [46.8.5(a)(2)]
 - (3) For CO₂ offset allowances, the number of CO₂ offset allowances that are available to be deducted in order for a CO₂ budget source to comply with the CO₂ requirements of subsection III.A.1 for a control period or interim control period may not exceed 3.3 percent of the CO₂ budget source's CO₂ emissions for that control period, or of 0.50 times the CO₂ budget source's CO₂ emissions for an interim control period, as determined in accordance with APC Regulation No. 46, sections 46.8, 46.9 and 46.10: [46.8.5(a)(3)]
 - (4) The CO₂ allowances are not necessary for deductions for excess emissions for a prior control period under subsection III.A.7(d) [46.8.5(a)(4)]

- b. Deductions for compliance.
 - (1) Following the recordation, in accordance with APC Regulation No. 46, subsection 46.7.2, of CO₂ allowance transfers submitted for recordation in the CO₂ budget source's compliance account by the CO₂ allowance transfer deadline for a control period or interim control period, the Department or its agent will deduct CO₂ allowances available under III.A.7(a) of this subsection to cover the source's CO₂ emissions (as determined in accordance with APC Regulation No.46, sections 46.9 and 46.10 for the control period or interim control period, as follows: [46.8.5(b)(1)]
 - (a) Until the amount of CO₂ allowances deducted equals the number of tons of total CO₂ emissions, emissions (or 0.50 times the number of tons of total CO₂ emissions for an interim control period), from all CO₂ budget units at the CO₂ budget source for the control period or interim control period; or [46.8.5(b)(1)a]
 - (b) If there are insufficient CO_2 allowances to complete the deductions in III.A.7(b)(1) of this subsection, until no more CO_2 allowances available under III.A.7(b)(1)(a) of this subsection remain in the compliance account. [46.8.5(b)(1)b]
- c. Identification of available CO₂ allowances by serial number; default compliance deductions.
 - (1) The CO_2 authorized account representative for a source's compliance account may request that specific CO_2 allowances, identified by serial number, in the compliance account be deducted for emissions or excess emissions for a control period or interim control period in accordance with III.A.7.b or III.A.7.d of this section. Such identification shall be made in the compliance certification report submitted in accordance with condition III.A.4.e. [46.8.5.(c)(1)]
 - (2) The Department or its agent will deduct CO_2 allowances for a control period or interim control period from the CO_2 budget source's compliance account, in the absence of an identification or in the case of a partial identification of available CO_2 allowances by serial number under III.A.7.c(1) of this section, in the following order: [46.8.5(c)(2)]
 - (a) First, subject relevant compliance deduction limitations under III.A.7.a(3) and III.A.7.d(1), CO₂ offset allowances.
 CO₂ offset allowances shall be deducted in chronological order (i.e., CO₂ offset allowances from earlier allocation years shall be deducted before CO₂ offset allowances from

later allocation years). In the event that some, but not all, CO_2 offset allowances from a particular allocation year are to be deducted, CO_2 offset allowances shall be deducted by serial number, with lower serial number allowances deducted before higher serial number allowances. [46.8.5(c)(2)a]

- (b) Second, any CO₂ allowances, other than CO₂ offset allowances that are available for deduction under III.A.7.a. CO₂ allowances shall be deducted in chronological order (i.e., CO₂ allowances from earlier allocation years shall be deducted before CO₂ allowances from later allocation years). In the event that some, but not all, CO₂ allowances from a particular allocation year are to be deducted, CO₂ allowances shall be deducted by serial number, with lower serial number allowances. [46.8.5(c)(2)b]
- d. Deductions for excess emissions.
 - (1) After making the deductions for compliance under III.A.7.b of this section, the Department or its agent will deduct from the CO₂ budget source's compliance account a number of CO₂ allowances, from allocation years that occur after the control period in which the source has excess emissions, equal to three times the number of the source's excess emissions. In the event that a source has insufficient CO₂ allowances to cover three times the number of the source's excess emissions, the source shall be required to immediately transfer sufficient allowances into its compliance account. No CO₂ offset allowances may be deducted to account for the source's excess emissions. [46.8.5(d)(1)]
 - (2) Any CO₂ allowance deduction required under III.A.7.d(1) of this section shall not affect the liability of the permittee for any fine, penalty, or assessment, or their obligation to comply with any other remedy, for the same violation, as ordered under applicable State law. The following guidelines will be followed in assessing fines, penalties or other obligations. [46.8.5(d)(2)]
 - (a) For purposes of determining the number of days of violation, if a CO_2 budget source has excess emissions for a control period, each day in the control period constitutes a day in violation unless the owners and operators of the unit demonstrate that a lesser number of days should be considered. The Department or its agent will have complete discretion to determine if the permittee demonstrated that a lesser number of days should be used. [46.8.5(d)(2)a]

- (b) Each ton of excess emissions is a separate violation. [46.8.5(d)(2)b]
- (c) For purposes of determining the number of days of violation, if a CO_2 budget source has excess interim emissions for an interim control period, each day in the interim control period constitutes a day in violation unless the permittee of the unit demonstrate that the lesser number of days should be considered. [46.8.5(d)(2)c]
- (d) Each ton of excess interim emissions is a separate violation. [46.8.5(d)(2)d]
- The propriety of the Department's determination that a CO₂ budget (3) source had excess emissions and the associated deduction of CO₂ allowances from that CO₂ budget source's account may be later challenged in the context of an administrative enforcement, or any civil or criminal judicial action arising from or encompassing that excess emissions violation. The commencement or pendency of any administrative enforcement, or civil or criminal judicial action arising from or encompassing that excess emissions violation will not act to prevent the Department or its agent from initially deducting the CO₂ allowances resulting from the Department's original determination that the relevant CO₂ budget source has had excess emissions. Should the Department's determination of the existence or extent of the CO₂ budget source's excess emissions be revised either by a settlement or final conclusion of any or judicial action, the Department shall: administrative [46.8.5(d)(3)]
 - (a) In any instance where the Department's determination of the extent of excess emissions was too low, the Department will take further action under III.A.7.d(1) and III.A.7.d(2) of this section to address the expanded violation. [46.8.5(d)(3)a]
 - (b) In any instance where the Department's determination of the extent of excess emissions was too high, the Department will distribute to the relevant CO_2 budget source a number of CO_2 allowances equaling the number of CO_2 allowances deducted which are attributable to the difference between the original and final quantity of excess emissions. Should such CO_2 budget source's compliance account no longer exist, the CO_2 allowances will be provided to a general account selected by the permittee. [46.8.5(d)(3)b]
- e. The Department will record in the appropriate compliance account all deductions from such an account pursuant to III.A.7.b and III.A.7.d of this section. [46.8.5(e)]

- f. Action by the Department on submissions.
 - (1) The Department may review and conduct independent audits concerning any submission under the CO_2 Budget Trading Program and make appropriate adjustments of the information in the submissions. [46.8.5(f)(1)]
 - (2) The Department may deduct CO_2 allowances from or transfer CO_2 allowances to a source's compliance account based on information in the submissions, as adjusted under III.A.7.f(1) of this section. [46.8.5(f)(2)]

8. Banking

Each CO_2 allowance that is held in a compliance account or a general account will remain in such account unless and until the CO_2 allowance is deducted or transferred under APC Regulation No. 46, section 46.7, subsection 46.11.2, condition III.A.7, or condition III.A.9. [46.8.6]

9. Account Error

The Department or its agent may, at its sole discretion and on his or her own motion, correct any error in any CO₂ Allowance Tracking System account. Within ten (10) business days of making such correction, the Department or its agent will notify the CO₂ authorized account representative for the account. [46.8.7]

10. Other Requirements

- a. The Department or its agent may review and conduct independent audits concerning any compliance certification or any other submission under the CO₂ Budget Trading Program and make appropriate adjustments of the information in the compliance certifications or other submissions. [46.11.2(a)]
- b. The Department or its agent may deduct CO₂ allowances from or transfer CO₂ allowances to a source's compliance account based on the information in the compliance certifications or other submissions, as adjusted under paragraph a of this subsection. [46.11.2(b)]
- c. Authorization and responsibilities of, changing of, objections concerning and delegation by the CO_2 authorized account representative and the alternate, changes in the owners and operators and matters concerning the account certificate of representation shall be conducted in accordance with APC Regulation No. 46, section 46.5. [46.5.1, 46.5.2, 46.5.3, 46.5.4, 46.5.5, 46.5.6, 46.5.7]
- d. The CO₂ Budget Trading Program portion of this permit is deemed to incorporate automatically the definition of terms under section 46.1 of APC Regulation No. 46. [46.6.1(c)]

- e. The CO₂ Budget Trading Program portion of this permit shall be modified in accordance with the procedures in Air Pollution Control Regulation No. 29. [46.6.4(a)]
- f. The CO₂ authorized account representative shall submit a complete CO₂ budget permit application under subsection 46.6.3 of APC regulation No. 46 in accordance with the provisions of Air Pollution Control Regulation No. 29 addressing permit renewals. [46.6.5(a)]
- g. The permittee shall not use any alternative to any requirement of 40 CFR Part 75 without having obtained prior written approval in accordance with subsection 46.10.5 of APC Regulation No. 46. [46.10.5]
- h. Any conditions included in Section III.A of this permit shall have the full force and effect of rules and regulations. [46.14.2]
- i. The permittee shall comply with all conditions included in Section III.A of this permit. [46.14.3]
- j. Failure to comply with any condition included in Section III.A of this permit shall be considered failure to comply with APC Regulation No. 46. [46.14.4]

B. <u>Acid Rain</u>

1. Sulfur Dioxide Requirements

- a. The permittee shall:
 - (1) Hold allowances, as of the allowance transfer deadline, in the compliance subaccount for G001 and G002 (after deductions under 40 CFR 73.34(c) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and [RI-PSD-6(I)(3)]
 - (2) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 72.9(c)(1)]
- Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 72.9(c)(2)]
- c. G001 and G002 shall be subject to the requirements under paragraph a of this section starting November 2002. [40 CFR 72.9(c)(3)(iv)]
- d. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72.9(c)(4)]

- e. An allowance shall not be deducted in order to comply with the requirements under paragraph a of this section prior to the calendar year for which the allowance was allocated. [40 CFR 72.9(c)(5)]
- f. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7, 72.8, or 72.14 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72.9(c)(6)]
- g. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72.9(c)(7)]

2. Monitoring Requirements

- a. The permittee and, to the extent applicable, the designated representative shall comply with the monitoring requirements as provided in 40 CFR Part 75. [40 CFR 72.9(b)(1)]
- b. The emissions measurements recorded and reported in accordance with 40 CFR Part 75 shall be used to determine compliance by G001 and G002 with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 72.9(b)(2)]
- c. The requirements of 40 CFR Part 75 shall not affect the responsibility of the permittee to monitor emissions of other pollutants or other emissions characteristics at G001 and G002 under other applicable requirements of the Act and other provisions of this operating permit. [40 CFR 72.9(b)(3)]

3. Excess Emissions Requirements

- a. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77. [40 CFR 72.9(e)(1)]
- b. The owners and operators of an affected unit that has excess emissions in any calendar year shall:
 - (1) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR Part 77; and
 - (2) Comply with the terms of an approved offset plan, as required by 40 CFR Part 77. [40 CFR 72.9(e)(2)]

4. Recordkeeping and Reporting Requirements

- a. Unless otherwise provided, the permittee shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or the Office of Air Resources:
 - (1) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
 - (2) All emissions monitoring information, in accordance with 40 CFR Part 75, provided that to the extent that 40 CFR Part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
 - (3) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
 - (4) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program. [40 CFR 72.9(f)]
- b. The designated representative shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR Part 72 Subpart I and 40 CFR Part 75. [40 CFR 72.9(f)(2)]

5. Liability

- a. Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7, 72.8, or 72.14, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act. [40 CFR 72.9(g)(1)]
- b. Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001. [40 CFR 72.9(g)(2)]

- c. No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect. [40 CFR 72.9(g)(3)]
- d. Each affected source and each affected unit shall meet the requirements of the Acid Rain Program. [40 CFR 72.9(g)(4)]
- e. Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source. [40 CFR 72.9(g)(5)]
- f. Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 (NO_x averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative. [40 CFR 72.9(g)(6)]
- g. Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act. [40 CFR 72.9(g)(7)]

6. Effect on Other Authorities

- a. No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7, 72.8, or 72.14 shall be construed as:
 - (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans; [40 CFR 72.9(h)(1)]
 - (2) Limiting the number of allowances a unit can hold; provided, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act; [40 CFR 72.9(h)(2)]

- (3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law; [40 CFR 72.9(h)(3)]
- (4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; [40 CFR 72.9(h)(4)]
- (5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established. [40 CFR 72.9(h)(5)]

C. <u>Ozone-depleting Substances</u>

This section contains air pollution control requirements that are applicable to this facility, and the United States Environmental Protection Agency enforces these requirements.

- 1. The permittee shall comply with the standards for labeling of products using ozonedepleting substances pursuant to 40 CFR Part 82, Subpart E:
 - a. All containers containing a class I or class II substance that is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to 40 CFR 82.106.
 - b. The placement of the required warning statement must comply with the requirements of 40 CFR 82.108.
 - c. The form of the label bearing the required warning statement must comply with the requirements of 40 CFR 82.110.
 - d. No person may modify, remove or interfere with the required warning statement except as described in 40 CFR 82.112.
- 2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVAC) in Subpart B:
 - a. Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices of 40 CFR 82.156.
 - b. Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment of 40 CFR 82.158.

- c. Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.
- d. Persons disposing of small appliances, MVACs and MVAC-like appliances (as defined in 40 CFR 82.152) must comply with recordkeeping requirements of 40 CFR 82.166.
- e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair equipment requirements of 40 CFR 82.156.
- f. 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 40 CFR 82.166.
- 3. If the permittee manufactures, transforms, imports or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart A, "Production and Consumption Controls".
- 4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, "Servicing of Motor Vehicle Air Conditioners".
- 5. 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.
- 6. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, "Significant New Alternatives Policy Program".

D. <u>Prevention of Accidental Releases</u>

This section contains air pollution control requirements that are applicable to this facility, and the United States Environmental Protection Agency enforces these requirements.

The permittee shall implement the Risk Management Program that was summarized and submitted as a Risk Management Plan in accordance with 40 CFR 68 on January 28, 2000 The permittee shall make any necessary modifications to the Risk Management Program and submit an updated Risk Management Plan in accordance with 40 CFR 68 by January 28, 2005. The risk Management Program must meet USEPA requirements and must include but is not limited to a Prevention Program, a Management System, an Offsite Consequence Analysis, and an Emergency Response Plan. In addition, the facility must

comply with any additional requirements imposed by the State upon promulgation of State Regulations.

Your facility is also subject to the requirements of the General Duty Clause, under 112(r)(1) of the CAA Amendments of 1990. This clause specifies that owners or operators of stationary sources producing, processing, handling or storing a chemical in <u>any quantity</u> listed in 40 CFR Part 68 or any other extremely hazardous substance have a general duty to identify hazards associated with these substances and to design, operate and maintain a safe facility, in order to prevent releases and to minimize the consequences of accidental releases which may occur.