



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

**OPERATING PERMIT**

*Ridgewood Power Management LLC*

**PERMIT NO. RI-41-09**

(Renewal date: June 30, 2009)

(Expiration date: June 30, 2014)

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

Ridgewood Power Management LLC  
65 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, Acting Chief  
Office of Air Resources**

---

**Date of issuance: 06/30/2009**

## TABLE OF CONTENTS

---

<u>SECTION</u>	<u>PAGE</u>
<b>SECTION I. SOURCE SPECIFIC CONDITIONS</b> .....	1
Requirements for Emissions Units E001, E002, E003, E004, E005, E006, E007, E008 and E009 .....	1
Requirements for Emission Units E011 and E012 .....	5
Requirements for Emission Units P001 and P002 .....	10
Requirements for Emission Units E013, E014, E015 and E016 .....	13
Facility Wide Requirements .....	18
<b>SECTION II. GENERAL CONDITIONS</b> .....	20
Annual Emissions Fee Payment .....	20
Permit Renewal and Expiration .....	20
Transfer of Ownership or Operation .....	20
Property Rights .....	20
Submissions .....	21
Inspection and Entry .....	21
Compliance .....	22
Excess Emissions Due to an Emergency .....	22
Duty to Provide Information .....	23
Duty to Supplement .....	23
Reopening for Cause .....	23
Severability Clause .....	24
Off-Permit Changes .....	24
Section 502(b)(10) Changes .....	25
Emissions Trading .....	26
Emission of Air Contaminants Detrimental to Person or Property .....	26
Odors .....	26
Visible Emissions .....	27
Open Fires .....	27
Construction Permits .....	27
Sulfur in Fuel .....	27
Air Pollution Episodes .....	29
Fugitive Dust .....	29
Compliance Certifications .....	29
Permit Shield .....	30
Recordkeeping .....	30
Reporting .....	31
Credible Evidence .....	32
Emission Statements .....	32
Miscellaneous Conditions .....	34
<b>SECTION III. SPECIAL CONDITIONS</b> .....	35
Ozone-depleting Substances .....	35
Prevention of Accidental Releases .....	36
<b>APPENDIX</b> .....	37

---

## SECTION I. SOURCE SPECIFIC CONDITIONS

---

**A. Requirements for Emissions Units E001, E002, E003, E004, E005, E006, E007, E008 and E009**

The following requirements are applicable to:

- Emission Units E001 – E009, each of which is a 2400 HP Waukesha/Dresser Industries engine – generator set, Model No. 12V- AT25GL, which burns landfill gas. Emission units E001-E009 are part of the facility known as Ridgewood Providence Power Partners, L.P.

**1. Emission Limitations**

a. Nitrogen Oxides (as nitrogen dioxide (NO<sub>2</sub>))

(1) The emission rate of nitrogen oxides from each engine exhaust shall not exceed 1.0 grams per brake horsepower - hour (gr/bhp-hr) or a maximum of 5.29 lbs per hour, whichever is more stringent. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(A)(1)(a)]

(2) The emission rate of nitrogen oxides from all nine engines combined shall not exceed 14,166 lbs per month (12-month rolling average). [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(A)(1)(b)]

b. Carbon Monoxide (CO)

The emission rate of carbon monoxide from each engine exhaust shall not exceed 2.0 gr/bhp-hr or a maximum of 10.58 lbs per hour, whichever is more stringent. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(A)(2)]

c. Total nonmethane hydrocarbons (NMHC)

The emission rate of total nonmethane hydrocarbons from each engine exhaust shall not exceed 0.5gr/bhp-hr or a maximum of 2.65 lbs per hour, whichever is more stringent. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(A)(3)]

d. Opacity

Visible emissions from each engine exhaust shall not exceed 10% opacity except for a period or periods aggregating no more than three minutes in any one-hour. [1.2, Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(B)(1)] 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. Only landfill gas shall be used as an engine fuel. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(B)(2)]
- b. In no event shall the gross electrical power generation for the entire facility exceed 9,928,000 kw-hrs per month (12-month rolling average). [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(B)(3)]
- c. Engine startup/shutdown shall be defined as that transient period of time required for the engine temperature parameters to stabilize for steady – state operation. This period shall not exceed 60 minutes. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(G)(1)]
- d. The emission limitations of Conditions I.A.1.a.(1), I.A.1.b, I.A.1.c and I.A.1.d shall not apply during engine startup/shutdown conditions. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(G)(3)]

**3. Monitoring Requirements**

- a. Total landfill gas flow to the engine building shall be continuously measured. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(C)(1)]
- b. Each engine electrical power generation in kw-hr shall be continuously measured. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(C)(2)]
- c. Gross electrical power generation kw-hr shall be continuously measured. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(C)(3)]

#### 4. Testing Requirements

a. Opacity

Tests for determining compliance with the opacity emission limitations specified in Condition I.A.1.d 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. Compliance with the emission limitation in Condition I.A.1.a.(2) shall be determined by the procedures established in the "Protocol to Monitor Annual Emissions of Oxides of Nitrogen at the NLPJV Landfill Gas Power Generation Facility in Johnston, Rhode Island" (September 1995). Testing shall be conducted once in each calendar quarter January – March, April – June, July – September and October - December. The Protocol may be amended from time-to-time by Ridgewood Power Management LLC after approval by the Office of Air Resources. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(A)(1)(b), Letter dated 25 August 1997 from Douglas L. McVay of RIDEM to Angelo Antignano III of Ridgewood Providence Power Partner's L.P.]

#### 5. Recordkeeping Requirements

- a. Total landfill gas flow to the engine building shall be continuously recorded. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(C)(1)]
- b. Each engine electrical power generation in kw-hr shall be continuously recorded. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(C)(2)]
- c. Gross electrical power generation kw-hr shall be continuously recorded. Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(C)(3)]
- d. The permittee shall maintain records of the hours of operation of each engine, including any start-up, shutdown or malfunction in the operations of the facility. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(E)(1)]
- e. The permittee shall, on a monthly basis, no later than 10 days after the first of each month, determine the nitrogen oxides emissions for the nine engines combined 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. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(E)(6)]

- f. The permittee shall, on a monthly basis, no later than 10 days after the first of each month, determine the gross electrical power generation for 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. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(E)(8)]
- g. The permittee shall maintain records of any scheduled and unscheduled maintenance to emissions units E001 – E009. [29.6.3(b)]

## **6. Reporting Requirements**

- a. The permittee shall notify the Office of Air Resources of any noncompliance with the terms of this permit, by telephone, within one hour of the discovery of the occurrence and in writing, within 5 business days of the occurrence. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(E)(5)]
- b. The permittee shall notify the Office of Air Resources whenever the nitrogen oxides emissions, for the nine engines combined exceeds 14,166 lbs in any one-month or 169,992 lbs in any 12 month period. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(E)(7)]
- c. The permittee shall notify the Office of Air Resources whenever the gross electrical power generation for the entire facility exceeds 9,928,000 kw-hrs per month (12 month rolling average). [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(E)(9)]

## **7. Other Permit Conditions**

- a. Operation of this equipment shall not result in the release of raw landfill gas to the atmosphere. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(F)(1)]
- b. Excess landfill gas, not used as a fuel in an engine, must be flared. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(F)(2)]

**B. Requirements for Emission Units E011 and E012**

The following requirements apply to:

- Emission unit E011 and E012, each of which is a 1735 HP Deutz engine - generator set, Model No. TBG-620-V16K, which burns landfill gas. Emission units E011 and E012 are part of the facility known as Ridgewood Rhode Island Generation LLC.

**1. Emission Limitations**

- a. Nitrogen oxides (as nitrogen dioxide (NO<sub>2</sub>))

The emission rate of nitrogen oxides from each engine/generator set exhaust shall not exceed 0.6 gram per brake horsepower hour (g/bhp-hr) or a maximum of 2.30 lbs per hour, whichever is more stringent. [Approval No. 1774-1775(A)(1)]

- b. Carbon Monoxide (CO)

The emission rate of carbon monoxide from each engine/generator set exhaust shall not exceed 2.5 g/bhp-hr or a maximum of 9.56 lbs per hour, whichever is more stringent. [Approval No. 1774-1775(A)(2)]

- c. Total nonmethane hydrocarbons (NMHC)

The emission rate of total nonmethane hydrocarbons from each engine/generator set exhaust shall not exceed 20 ppmvd (as hexane) @ 3% O<sub>2</sub> or a maximum of 0.62 lb per hour, whichever is more stringent. [Approval No. 1774-1775(A)(3)]

- d. Opacity

Visible emissions from each engine/generator set exhaust shall not exceed 10% opacity except for a period or periods aggregating no more than three minutes in any one hour. [1.2, Approval No. 1774-1775(A)(4)] 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. Only landfill gas shall be used as an engine fuel. [Approval No. 1774-1775(B)(1)]

- b. The landfill gas shall be filtered, de-watered, and compressed prior to use in the engines in accordance with the provisions of 40 CFR 60.752(b)(2)(iii)(C). [Approval No. 1774-1775(B)(2)]
- c. The permittee shall operate each engine at the air-to-fuel ratio that the engine operated at during the performance test required by Condition I.B.4.a of this permit, or the most recent performance test if a subsequent performance test is conducted. [Approval No. 1774-1775(B)(3)]
- d. The permittee shall operate each engine within 0.5% of the O<sub>2</sub> content in the exhaust gas at the air-to-fuel ratio that the engine operated at during the performance test required by Condition I.B.4.a of this permit, or the most recent performance test if a subsequent performance test is conducted. [Approval No. 1774-1775(B)(4)]

### **3. Monitoring Requirements**

- a. Total landfill gas flow to the engines shall be continuously measured. [Approval No. 1774-1775(C)(1)]
- b. Gross electrical power generation (kw-hrs) shall be continuously measured for each engine individually and for the two engines combined. [Approval No. 1774-1775(C)(2)]
- c. Each engine/generator set shall be equipped with a non-resettable elapsed time meter to indicate, in cumulative hours, the elapsed engine operating time. [Approval No. 1774-1775(C)(3)]
- d. The permittee shall, on a monthly basis, measure the O<sub>2</sub> content in the exhaust gas of each engine. [Approval No. 1774-1775(C)(4), 29.6.3(b)]

### **4. Testing Requirements**

- a. Within 180 days of start-up, initial performance testing shall be conducted on the engine/generator sets. Performance testing shall be conducted for nitrogen oxides, carbon monoxide and total non-methane hydrocarbons. Start-up shall mean when an engine/generator set goes on-line to produce power for sale. [Approval No. 1774-1775(D)(1)]
- b. The permittee shall record the air-to-fuel ratio setting and the O<sub>2</sub> content in the exhaust gas for each engine during the performance test. [Approval No. 1774-1775(D)(2)]
- c. A stack testing protocol shall be submitted to the Office of Air Resources for review and approval prior to the performance of any stack tests. The

permittee shall provide the Office of Air Resources at least 60 days prior notice of any performance test. [Approval No. 1774-1775(D)(3)]

- d. All test procedures used for stack testing shall be approved by the Office of Air Resources prior to the performance of any stack tests. [Approval No. 1774-1775(D)(4)]
- e. The permittee shall install any and all test ports or platforms necessary to conduct the required stack testing, provide safe access to any platforms and provide the necessary utilities for sampling and testing equipment. [Approval No. 1774-1775(D)(5)]
- f. All testing shall be conducted under operating conditions deemed acceptable and representative for the purpose of assessing compliance with the applicable emission limitation. [Approval No. 1774-1775(D)(6)]
- g. A final report of the results of stack testing shall be submitted to the Office of Air Resources no later than 60 days following completion of the testing. [Approval No. 1774-1775(D)(7)]
- h. All stack testing must be observed by the Office of Air Resources or its authorized representatives to be considered acceptable. [Approval No. 1774-1775(D)(8)]
- i. Opacity

Tests for determining compliance with the opacity emission limitations specified in Condition I.B.1.d 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]

## **5. Recordkeeping Requirements**

- a. The permittee shall continuously record the total landfill gas flow to the engines. [Approval No. 1774-1775(C)(1)]
- b. The permittee shall continuously record gross electrical power generation (kw-hrs) for each engine individually and for the two engines combined. [Approval No. 1774-1775(C)(2)]
- c. The permittee shall, on a monthly basis, record the O<sub>2</sub> content in the exhaust gas of each engine. [Approval No. 1774-1775(C)(4)]
- d. The permittee shall maintain the following records on a monthly basis: [Approval No. 1774-1775(E)(1)]

- (1) The hours of operation of each engine/generator set, including any start-up, shutdown or malfunction in the operations of the facility. [Approval No. 1774-1775(E)(1)(a)]
  - (2) The total landfill gas flow to each engine. [Approval No. 1774-1775(E)(1)(b)]
  - (3) Gross electrical power generation in kw-hr for each engine and for the two engines combined. [Approval No. 1774-1775(E)(1)(c)]
- e. The permittee shall maintain records of any scheduled and unscheduled maintenance to emissions units E011 – E012. [29.6.3(b)]

## **6. Reporting Requirements**

- a. The permittee shall notify the Office of Air Resources of any anticipated noncompliance with the terms of Section I.B. of this permit or any other applicable air pollution control rules and regulations. [Approval No. 1774-1775(E)(4)]
- b. The permittee shall notify the Office of Air Resources, in writing, of any noncompliance with the terms of Section I.B. of this permit within 5 business days of such occurrence and supply the Director with the following information: [Approval No. 1774-1775(E)(5), 29.6.4(b)(2)]
  - (1) The name and location of the facility; [Approval No. 1774-1775(E)(5)(a)]
  - (2) The subject source(s) that caused the noncompliance with the permit term; [Approval No. 1774-1775(E)(5)(b)]
  - (3) The time and date of first observation of the incident of noncompliance; [Approval No. 1774-1775(E)(5)(c)]
  - (4) The cause and expected duration of the incident of noncompliance; [Approval No. 1774-1775(E)(5)(d)]
  - (5) The estimated rate of emissions (expressed in lbs/hr or lbs/day) during the incident and the operating data and calculations used in estimating the emission rate. [Approval No. 1774-1775(E)(5)(e)]
  - (6) The proposed corrective actions and schedule to correct the conditions causing the incidence of noncompliance. [Approval No. 1774-1775(E)(5)(f)]

## **7. Other Requirements**

- a. To the extent consistent with the requirements of Section I.B. of this permit and applicable federal and state laws, the facility shall be operated in accordance with the representation of the facility in the preconstruction permit application dated March 2003, prepared by GZA GeoEnvironmental, Inc. [Approval No. 1774-1775(F)(1)]
- b. Operation of this equipment shall not result in the release of raw landfill gas to the atmosphere. [Approval No. 1774-1775(F)(3)]
- c. The permittee shall install and maintain an automatic fail-safe block valve on each engine. The fail-safe block valve must stop the flow of landfill gas in the event of an engine failure. [Approval No. 1774-1775(F)(4)]
- d. Excess landfill gas, not used as a fuel in an engine, must be flared. [Approval No. 1774-1775(F)(5)]
- e. At all times, including periods of startup, shutdown and malfunction, the permittee shall, to the extent practicable, maintain and operate the facility in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Office of Air Resources which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the source. [Approval No. 1774-1775(F)(6)]

## **8. Startup/Shutdown and Initial Commissioning Requirements**

- a. Engine startup/shutdown shall be defined as that transient period of time required for the engine temperature parameters to stabilize for steady-state operation. This period shall not exceed 60 minutes. [Approval No. 1774-1775(G)(1)]
- b. Initial engine commissioning shall be defined as the first 200 hours of combustion engine operation following initial startup or to commercial acceptance, whichever is less. [Approval No. 1774-1775(G)(2)]
- c. The emission limitations of Conditions I.B.1.a(1-4) shall not apply during engine startup/shutdown conditions or each engine's initial commissioning. [Approval No. 1774-1775(G)(3)]

- d. The permittee shall submit to the Office of Air Resources for review and approval, at least 30 days prior to startup, the procedures to be followed during engine startup/shutdown conditions and initial engine commissioning. The procedures shall be designed to minimize the emission of air contaminants to the maximum extent practical. [Approval No. 1774-1775(G)(4)]

**C. Requirements for Emission Units P001 and P002**

The following requirements apply to:

- Emission Units P001 and P002, which consist of a 30-gallon and 45-gallon Resolve Industries remote reservoir degreasers. Emission units P001 and P002 are part of the facility known as Ridgewood Providence Power Partners, L.P.

**1. Operating Requirements**

- a. Equipment covers and dipping or rotating baskets shall be constructed of nonporous or nonabsorbent material. Covers must form a tight seal with the sides of P001 and P002 and have no gaps or holes. [36.4.1]
- b. When the cover of either P001 and/or P002 is/are open, drafts at the same elevation as the tanks lip must not be greater than 40 m/min. (130 ft/min.) when measured 1 to 2 meters (3 to 7 feet) upwind. [36.4.2]
- c. Leaks shall be repaired immediately or P001 and/or P002 shall be shut down [36.4.3]
- d. Equipment used in P001 and P002 shall display a conspicuous summary of proper operating procedures consistent with minimizing emissions of organic solvents. [36.4.4]
- e. Any solvent spray must be a solid, fluid stream which is delivered at a pressure no greater than 10 pounds per square inch (psi) and which does not cause excessive splashing. No solvent spray shall be an atomized or shower spray. [36.4.5]
- f. Spills shall be wiped up immediately. The wipe rags shall be stored in covered containers meeting the specification in Condition I.C.1.1 of this permit. [36.4.6]
- g. No porous or absorbent materials, such as sponges, fabrics, wood, or paper products, shall be placed in P001 and P002. [36.4.7]

- h. Parts baskets or parts shall be drained under the cover and shall not be removed from P001 and P002 for at least 15 seconds or until dripping ceases and the pieces are visually dry, whichever is longer. [36.4.8]
- i. Parts with cavities or blind holes shall be tipped or rotated while draining before removed from the vapor zone and shall be oriented for best drainage. [36.4.9]
- j. All parts shall be oriented for best drainage. [36.4.10]
- k. When solvent is added to or drained from P001 and P002, the solvent shall be transferred using threaded or other leakproof couplings and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface. [36.4.11]
- l. Solvent, waste solvent, still bottoms, and sump bottoms shall be stored in covered containers and waste solvent transferal or disposal shall not allow greater than 20 percent of the waste solvent (by weight) to evaporate into the atmosphere. The closed containers may contain a device that allows for pressure relief, providing that the device does not allow liquid solvent to drain from the containers. [36.4.12]
- m. P001 and P002 shall be maintained as recommended by the manufacturer of the equipment. [36.4.13]
- n. Operators must receive training in proper solvent cleaning procedures and, if requested by representatives of the Office of Air Resources or the USEPA during an inspection, shall complete and pass the applicable sections of the test on those procedures as shown in Appendix A of APC Regulation No. 36. [36.4.14]
- o. No work area fans shall be located and positioned so that they blow across the opening of P001 and P002. [36.4.15]
- p. P001 and P002 shall be located and positioned so that ventilation from an open window does not blow across the opening of P001 and P002. [36.4.16]
- q. P001 and P002 shall be equipped with an attached cover that can be operated easily with one hand. The covers shall be closed at all times except during parts entry and removal. [36.5.1]
- r. The solvent sump of P001 and P002 shall be equipped with a tight fitting cover that is kept closed at all times except during the cleaning of parts. [36.5.2]

- s. A freeboard ratio greater than or equal to 0.75 shall be used to control solvent emissions from P001 and P002. [36.5.3]
- t. If a flexible hose or flushing device is used, flushing shall be performed only within the freeboard zone of P001 and P002. [36.5.4]
- u. The height of the solvent in P001 and P002 shall not exceed the manufacturer's fill-line for that machine. [36.5.6]
- v. P001 and P002 shall not use any solvent with a vapor pressure equal to or greater than 1.0 millimeters of mercury (mm Hg), measured at 20°C (68°F). The following are exempt from this requirement: [36.5.7]
  - (1) A cold cleaning unit with an internal volume of 1 liter or less; [36.5.7(a)]
  - (2) A cold cleaning unit used for special and extreme solvent cleaning, as defined in APC Regulation 36 Subsection 36.1.27, with the Director's approval; [36.5.7(b)]
  - (3) A cold cleaning unit which cannot be operated safely using a solvent that complies with the vapor pressure limit in APC Regulation 36 Subsection 36.1.27, with the Director's approval; [36.5.7(c)]
  - (4) A cold cleaning unit operated in a permanent total enclosure equipped with an air pollution control system with an overall VOC removal efficiency of 90% or greater, with the Director's approval. [36.5.7(d)]

## **2. Recordkeeping Requirements**

- a. The permittee shall maintain the following records:
  - (1) Training provided to operators of P001 and P002 for the lifetime of the units, [36.10.4, 29.6.3(b)]
  - (2) The amount and type of solvent used in P001 and P002 for each year, and [36.10.4(a), 29.6.3(b)]
  - (3) The date and type of each equipment malfunction or leak and the date the malfunction or leak is repaired. [36.10.4(b), 29.6.3(b)]

**D. Requirements for Emission Units E013, E014, E015 and E016**

The following requirements apply to:

- Emission units E013, E014, E015 and E016, each of which is a 2229 HP Caterpillar engine - generator set, Model No. G3520C, which burns landfill gas. Emission units E013, E014, E015 and E016 are part of the facility known as Ridgewood Rhode Island Generation LLC.

**1. Emission Limitations**

- a. Nitrogen oxides (as nitrogen dioxide (NO<sub>2</sub>))

The emission rate of nitrogen oxides from each engine/generator set exhaust shall not exceed 0.5 gram per brake horsepower hour (g/bhp-hr) or a maximum of 2.46 lbs per hour, whichever is more stringent. [RI-PSD-7(A)(1)]

- b. Carbon Monoxide (CO)

The emission rate of carbon monoxide from each engine/generator set exhaust shall not exceed 2.75 g/bhp-hr or a maximum of 13.51 lbs per hour, whichever is more stringent. [RI-PSD-7(A)(2)]

- c. Total nonmethane hydrocarbons (NMHC)

The emission rate of total nonmethane hydrocarbons from each engine/generator set exhaust shall not exceed 20 ppmvd @ 3% O<sub>2</sub> or a maximum of 0.76 lb per hour, whichever is more stringent. [RI-PSD-7(A)(3)]

- d. Particulate Matter less than 10 microns (PM<sub>10</sub>)

The emission rate of particulate matter less than 10 microns from each engine/generator set exhaust shall not exceed 0.1 g/bhp-hr or a maximum of 0.49 lbs per hour, whichever is more stringent. [RI-PSD-7(A)(4)]

- e. Opacity

Visible emissions from each engine/generator set exhaust shall not exceed 10% opacity except for a period or periods aggregating no more than three minutes in any one hour. [1.2, RI-PSD-7(A)(5)] 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. Only landfill gas shall be used as an engine fuel. [RI-PSD-7(B)(1)]
- b. The landfill gas shall be filtered, de-watered, and compressed prior to use in the engines in accordance with the provisions of 40 CFR 60.752(b)(2)(iii)(C). [RI-PSD-7(B)(2)]
- c. The permittee shall operate each engine to maintain the actual charge density of the air/fuel mixture to match the desired charge density of the air/fuel mixture. On an annual basis, the permittee shall demonstrate compliance with this condition by generating a graph of actual charge density vs. desired charge density during the performance test required by Condition I.D.4.a [RI-PSD-7(B)(3)]
- d. The set points for emissions factor and specific heat ratio in the Caterpillar Air-Fuel ratio control system shall be those determined during the most recent performance test. [RI-PSD-7(B)(4)]

## 3. Monitoring Requirements

- a. Total landfill gas flow to the engines shall be continuously measured and recorded. [RI-PSD-7(C)(1)]
- b. Gross electrical power generation (kw-hrs) shall be continuously measured for each engine individually and for the four engines combined. [RI-PSD-7(C)(2)]
- c. Each engine/generator set shall be equipped with a non-resettable elapsed time meter to indicate, in cumulative hours, the elapsed engine operating time. [RI-PSD-7(C)(3)]
- d. The permittee shall continuously monitor the actual charge density of the air/fuel mixture. Upon request, the permittee shall make available to the Office of Air Resources or its representative, a graph of actual charge density vs. desired charge density. [RI-PSD-7(C)(4), 29.6.3(b)]
- e. The permittee shall conduct quarterly analyses of the landfill gas being used as an engine fuel. At a minimum, the landfill gas should be analyzed for the following compounds: acetone, acrylonitrile, benzene, bromodichloromethane, carbon disulfide, carbon tetrachloride, carbonyl sulfide, chlorobenzene, chlorodifluoromethane, chloroform, cyclohexane, cyclohexane, 1,4 dichlorobenzene, cis-1,2 dichloroethene, trans-1,2 dichloroethene, ethyl benzene, ethyl chloride, ethylene dibromide, ethylene dichloride, ethylidene dichloride, hexane, hydrogen sulfide, isopropanol,

mercury, methyl chloride, methyl chloroform, methyl ethyl ketone, methyl isobutyl ketone, methylene chloride, propylene dichloride, styrene, 1,1,2,2 tetrachloroethane, tetrachloroethylene, toluene, total chlorides, trichloroethylene, trichlorofluoromethane, vinyl chloride, vinylidene chloride and xylenes. The permittee shall keep records of these analyses and provide such records to the Office of Air Resources upon request. [RI-PSD-7(C)(5)]

#### **4. Testing Requirements**

- a. Performance testing shall be conducted annually to determine compliance with the nitrogen oxide emission limitation. [RI-PSD-7(D)(1)]
- b. The permittee shall generate a graph that tracks actual charge density, desired charge density, engine load and nitrogen oxides emissions through one complete cycle of 100 percent load to 0 percent load to 100 percent load during each performance test. The permittee shall record emissions factor, specific heat ratio, and the flash file (combustion control software) serial number during each performance test. [RI-PSD-7(D)(2)]
- c. A stack testing protocol shall be submitted to the Office of Air Resources for review and approval prior to the performance of any stack tests. The permittee shall provide the Office of Air Resources at least 60 days prior notice of any performance test. [RI-PSD-7(D)(3)]
- d. All test procedures used for stack testing shall be approved by the Office of Air Resources prior to the performance of any stack tests. [RI-PSD-7(D)(4)]
- e. The permittee shall install any and all test ports or platforms necessary to conduct the required stack testing, provide safe access to any platforms and provide the necessary utilities for sampling and testing equipment. [RI-PSD-7(D)(5)]
- f. All testing shall be conducted under operating conditions deemed acceptable and representative for the purpose of assessing compliance with the applicable emission limitation. [RI-PSD-7(D)(6)]
- g. A final report of the results of stack testing shall be submitted to the Office of Air Resources no later than 60 days following completion of the testing. [RI-PSD-7(D)(7)]
- h. All stack testing must be observed by the Office of Air Resources or its authorized representatives to be considered acceptable. [RI-PSD-7(D)(8)]

i. Opacity

Tests for determining compliance with the opacity emission limitations specified in Condition I.D.1.g 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]

**5. Recordkeeping Requirements**

- a. The permittee shall maintain the following records on a monthly basis:
- (1) The hours of operation of each engine/generator set, including any start-up, shutdown or malfunction in the operations of the facility.
  - (2) The total landfill gas flow to each engine.
  - (3) Gross electrical power generation (kw-hrs) for each engine individually and for the four engines combined. [RI-PSD-7(E)(1)]
- b. The permittee shall maintain records of the set points for emissions factor and specific heat ratio in the Caterpillar Air-Fuel ratio control system determined during the most recent performance test and the current flash file serial number. [RI-PSD-7(E)(2)]
- c. The permittee shall maintain records of any scheduled and unscheduled maintenance to emissions units E013, E014, E015 and E016. [29.6.3(b)]

**6. Reporting Requirements**

- a. The permittee shall notify the Office of Air Resources, in writing, within 15 days after the end of the calendar quarter, if the quarterly analysis of the landfill gas being used as an engine fuel shows that the concentration of any compound exceeds the reportable concentrations in Table 1. [RI-PSD-7(E)(3)]
- b. The permittee shall notify the Office of Air Resources of any anticipated noncompliance with the terms of Section I.D. of this permit or any other applicable air pollution control rules and regulations. [RI-PSD-7(E)(6)]
- c. The permittee shall notify the Office of Air Resources, in writing, of any noncompliance with the terms of Section I.D. of this permit within 5 business days of such occurrence and supply the Director with the following information: [Approval No. RI-PSD-7(E)(7), 29.6.4(b)(2)]

- (1) The name and location of the facility; [RI-PSD-7(E)(7)(a)]
  - (2) The subject source(s) that caused the noncompliance with the permit term; [RI-PSD-7(E)(7)(b)]
  - (3) The time and date of first observation of the incident of noncompliance; [RI-PSD-7(E)(7)(c)]
  - (4) The cause and expected duration of the incident of noncompliance; [RI-PSD-7(E)(7)(d)]
  - (5) The estimated rate of emissions (expressed in lbs/hr or lbs/day) during the incident and the operating data and calculations used in estimating the emission rate. [RI-PSD-7(E)(7)(e)]
  - (6) The proposed corrective actions and schedule to correct the conditions causing the incidence of noncompliance. [RI-PSD-7(E)(7)(f)]
- d. The permittee shall notify the Office of Air Resources in writing of any planned changes to the combustion control software.

Such notification shall include:

- Information describing the nature of the change.
- Information describing the effect of the change on the combustion control system.
- The scheduled completion date of the planned change.

If such change effects the combustion controls, performance testing shall be conducted within 60 days of the change to determine compliance with the nitrogen oxide emission limitation. [RI-PSD-7(E)(8)]

## **7. Other Requirements**

- a. To the extent consistent with the requirements of Section I.D. of this permit and applicable federal and state laws, the facility shall be operated in accordance with the representation of the facility in the preconstruction permit application dated November 2003, prepared by GZA GeoEnvironmental, Inc. [RI-PSD-7(F)(1)]

- b. Operation of this equipment shall not result in the release of raw landfill gas to the atmosphere. [RI-PSD-7(F)(3)]
- c. The permittee shall install and maintain an automatic fail-safe block valve on each engine. The fail-safe block valve must stop the flow of landfill gas in the event of an engine failure. [RI-PSD-7(F)(4)]
- d. Excess landfill gas, not used as a fuel in an engine, must be flared. [RI-PSD-7(F)(5)]
- e. At all times, including periods of startup, shutdown and malfunction, the permittee shall, to the extent practicable, maintain and operate the facility in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Office of Air Resources which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the source. [RI-PSD-7(F)(6)]

#### **8. Startup/Shutdown Requirements**

- a. Engine startup/shutdown shall be defined as that transient period of time required for the engine temperature parameters to stabilize for steady-state operation. This period shall not exceed 60 minutes. [RI-PSD-7(G)(1)]
- b. The emission limitations of Conditions I.D.1.a-e shall not apply during engine startup/shutdown conditions. [RI-PSD-7(G)(3)]
- c. The permittee shall submit to the Office of Air Resources for review and approval, at least 30 days prior to startup, the procedures to be followed during engine startup/shutdown conditions initial engine commissioning. The procedures shall be designed to minimize the emission of air contaminants to the maximum extent practical. [RI-PSD-7(G)(4)]

### **E. Facility Wide Requirements**

#### **1. Operating Requirements**

- a. Facility wide emissions of Hazardous Air Pollutants (HAPs) from facility-wide cold cleaning operations shall not exceed 1,500 pounds of any (1) HAP or 4,000 pounds of any combination of HAPs per calendar month, based upon a 12-month rolling average unless a greater quantity of HAP emissions is allowed by an operating permit issued pursuant to Air

Pollution Control Regulation No. 29. In no case shall emissions exceed the facility wide emission limits specified in 40 CFR Part 63.471. [36.4.17]

## SECTION II. GENERAL CONDITIONS

---

**A. Annual Emissions Fee Payment**

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

**B. Permit Renewal and Expiration**

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.Y 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]

**C. Transfer of Ownership or Operation**

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)]

**D. Property Rights**

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

**E. Submissions**

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. Room 230  
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  
One Congress St. Suite 1100 (SEA)  
Boston, MA 02114 – 2023

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)]

**F. 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), Approval No. 1774-1775(F)(2), RI-PSD-7(F)(2)]

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

**G. Compliance**

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, or for denial of a permit renewal application. [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)]

**H. Excess Emissions Due to an Emergency**

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.AA.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)]

**I. Duty to Provide Information**

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)]

**J. Duty to Supplement**

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]

**K. Reopening for Cause**

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)]

All permit conditions remain in effect until such time as the Office of Air Resources takes final action. 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 stay any permit condition. [§70.6(a)(6)(iii)]

**L. Severability Clause**

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)]

**M. Off-Permit Changes**

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)]

**N. Section 502(b)(10) Changes**

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 not 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)]

**O. Emissions Trading**

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)]

**P. 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. [7.1]

**Q. Odors**

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. [17.1]
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. [17.2]

**R. Visible Emissions**

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]

**S. Open Fires**

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]

**T. Construction Permits**

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]

**U. Sulfur in Fuel**

1. Except as may be specified in other provisions of this permit, unless the Director declares in writing after a hearing that a shortage of low sulfur fuel exists, the permittee shall not use or store fuel oil with a sulfur content greater than 1.0% by weight, except for use with marine vessels or motor vehicles. [8.2, 8.3.6]
2. Compliance with the sulfur in fuel limitations contained in this section shall be determined by the procedures listed below or by another method deemed equivalent by the Director and USEPA: [29.6.3(b)]
  - a. For each shipment of fuel oil, the permittee shall obtain a certification from the fuel supplier which contains:
    - (1) For distillate fuel oil:
      - (a) the name of the supplier
      - (b) a statement that the oil complies with the specification for fuel oil number 1 or 2, as defined by the American Society for

Testing and Materials in ASTM D396-78 "Standard Specification for Fuel Oils."

- (2) For residual fuel oil:
  - (a) The name of the supplier,
  - (b) The nitrogen and sulfur content of the oil and the ASTM method used to determine the nitrogen and sulfur content of the oil,
  - (c) The location of the oil when the sample was drawn for analysis to determine the nitrogen and sulfur content of the oil, specifically including whether the oil was sampled as delivered to the permittee or whether the sample was drawn from oil in storage at the oil suppliers/refiners facility or another location. [27.6.5(a – d)]
- (3) For diesel fuel oil:
  - (a) the name of the supplier
  - (b) a statement that the oil complies with the specification for diesel fuel oil grade 1-D or 2-D, as defined by the American Society for Testing and Materials in ASTM D975-03 "Standard Specification for Fuel Oils."

- b. As an alternative to fuel oil certification, the permittee may elect to sample the fuel oil prior to combustion. Sampling and analysis shall be conducted after each new shipment of fuel oil is received. Samples shall be collected from the fuel tank immediately after the fuel tank is filled and before any fuel oil is combusted. [8.4.1(b), 27.6.6]
- c. All fuel oil must be sampled and analyzed according to ASTM methods which have the prior approval of or are required by the Office of Air Resources. [8.4.1(b), 27.6.6]
- d. 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 designated personnel of the Office of Air Resources 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. [27.6.7]
- e. 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. Sampling and analysis of fossil fuels under Condition II.U.2 of this permit shall not limit the collection of samples under this condition. [8.4.3]

**V. Air Pollution Episodes**

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]

**W. Fugitive Dust**

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. [5.2]

**X. Compliance Certifications**

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 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)]

**Y. Permit Shield**

1. Compliance with the terms and conditions of this permit shall be deemed compliance with all requirements applicable to the source: RI-PSD-7, Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013, 1405, 1774 and 1775, Rhode Island APC Regulation Nos. 1, 4, 5, 7, 8, 9, 10, 14, 17, 27, 28, 29 and 36. [29.6.12(a)(1)]
2. The Office of Air Resources has determined that units E001- E009, E011-E016 and P001- P002 are not subject to 40 CFR 60 Subpart WWW; Rhode Island APC Regulation Nos. 3, 6, 11, 12, 13, 15, 16, 19, 20, 21, 22, 24, 25, 26, 30, 31, 32, 33, 35, 39, 41 and 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 USEPA 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)]

**Z. Recordkeeping**

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 65 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), 27.6.11, Approval Nos. 999, 1001, 1003, 1005, 1007, 1009, 1011, 1013 & 1405(E)(10), Approval No. 1774-1775(E)(6), RI-PSD-7(E)(9)]
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)a]
  - b. The date(s) analyses were performed; [29.6.4(a)(1)b]
  - c. The company or entity that performed the analyses; [29.6.4(a)(1)c]
  - d. The analytical techniques or methods used; [29.6.4(a)(1)d]
  - e. The results of such analyses; and [29.6.4(a)(1)e]
  - f. The operating conditions as existing at the time of sampling or measurement. [29.6.4(a)(1)f]

**AA. Reporting**

1. The information recorded by the permittee pursuant to Condition II.Z.1 of this Section shall be summarized and reported at least annually to the Director. It shall be submitted by April 15<sup>th</sup> unless otherwise specified. [14.2.2] Information submitted pursuant to this condition will be correlated with applicable emission limitations and other applicable emission 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 each 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.X.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.X.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. [Approval Nos. 999, 1002, 1003, 1005, 1007, 1009, 1011, 1013, 1405(E)(4), Approval No. 1774-1775(E)(3), RI-PSD-7(E)(5)]

**BB. Credible Evidence**

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 51.212(c), 51.12(c), 52.33(a)]

**CC. Emission Statements**

1. The permittee shall submit annually an emission statement that includes information for both VOC and NO<sub>x</sub> if facility wide actual emissions are 25 tons per year of either pollutant. Emission statements shall be submitted to the Director on April 15<sup>th</sup> 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 an 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<sub>x</sub>, 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<sub>x</sub> 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<sub>x</sub>,
  - (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<sub>x</sub> 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.

**DD. Miscellaneous Conditions**

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 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.

### SECTION III. SPECIAL CONDITIONS

---

#### A. Ozone-depleting Substances

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 ozone-depleting 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. 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".

**B. Prevention of Accidental Releases**

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

Your facility is 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 any quantity 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.

**APPENDIX**

Table 1  
 Reportable Concentrations

Pollutant	CAS Number	Reportable Concentration (ppm)
Acetone	67641	757,500
Benzene	71432	30
Carbon Disulfide	75150	57,794
Carbonyl Sulfide	463581	2435
Chlorobenzene	108907	160,000
Cyclohexane	110827	234,000
1,4 Dichlorobenzene	106467	16
cis-1,2 Dichloroethene	156592	22,673
Ethyl benzene	100414	30,950
Ethyl chloride	75003	447,058
Ethylidene dichloride	75343	132
Hexane	110543	50,000
Hydrogen sulfide	7783064	823
Isopropanol	67630	36,574
Mercury	7439976	0.13
Methyl ethyl ketone	78933	99,375
Methyl isobutyl ketone	108101	98,275
Methylene chloride	75092	430
Styrene	100425	24,750
Tetrachloroethylene	127184	28
Toluene	108883	14,272
Trichloroethylene	79016	105
Trichlorofluoromethane	75694	23,809
Vinyl Chloride	75014	72
Xylenes	1330207	21,455
Total Chloride		792