

Charlotte County Department of Public Works
Solid Waste Division
Zemel Road Municipal Solid Waste
Management Facility
Facility ID No. 0150075
Charlotte County

Title V Air Operation Permit Revision

Permit No. 0150075-013-AV
(Revision of Title V Air Operation Permit No. 0150075-008-AV)



Permitting Authority:

State of Florida
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Air Resource Management, South District
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Permit No. 0150075-013-AV
Zemel Road MSW Management Facility
Facility ID No. 0150075
Title V Air Operation Permit Revision

The purpose of this permit is to revise the Title V air operation permit for the above referenced facility. The existing Zemel Road Municipal Solid Waste Management Facility is located in Charlotte County at 29751 Zemel Road, Punta Gorda, Florida. UTM Coordinates are: Zone 17, 405.47 East and 2963.98 North. Latitude is: 26° 47' 44" North; and, Longitude is: 81° 57' 38" West.

The Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213. The above named permittee is hereby authorized to operate the facility in accordance with the terms and conditions of this permit.

Effective Date: DATE, 20xx
Renewal Application Due Date: Exp. DATE -225, 20xx
Expiration Date: Eff. DATE + 5 years, 20xx

Draft/Proposed

Jon M. Iglehart
Director of
District Management

JMI/SRM/jw

SECTION I. FACILITY INFORMATION.

SUBSECTION A. FACILITY DESCRIPTION.

This existing facility is a Class I landfill constructed in 1975. The landfill has a design capacity of approximately 7.5 million megagrams (Mg). Since the landfill capacity is equal to or greater than 2.5 million Mg by mass, the facility is subject to Title 40 Code of Federal Regulations (CFR) Part 70 or Part 71 and 40 CFR 60 Subpart WWW. The facility is authorized to accept asbestos waste material. Based on Tier 2 landfill gas (LFG) sampling and analysis conducted in year 2007, non-methane organic compound (NMOC) generated by this landfill were calculated to be less than 50 Mg per year. Estimated NMOC emissions in year 2015 is 37.2 TPY (33.8 Mg/yr). In 2010, the facility completed construction on an active gas collection system and 2000 scfm flare as part of a gas to energy project. In 2011 the facility constructed two reciprocating internal combustion engines in connection with the gas to energy project. The gas collection and control system was constructed before being required per 40 CFR 60 Subpart WWW. The facility is not subject to the gas collection and control requirements of Subpart WWW until the facility exceeds 50 Mg NMOC. This permit revision incorporates two of three engines (EU013 and EU014) authorized under Permit No. 0150075-011-AC. The facility is subject to the following federal regulations: 40 CFR 60 Subpart A, General Provisions; 40 CFR 60 Subpart CC, Emissions Guidelines and Compliance Times for Municipal Solid Waste Landfills; 40 CFR 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills; 40 CFR 60 Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 61 Subpart M, National Emissions Standard for Asbestos; 40 CFR 63 Subpart A, General Provisions; and 40 CFR 63 Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engine.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

SUBSECTION B. SUMMARY OF EMISSIONS UNITS.

EU No.	Brief Description
<i>Regulated Emissions Units</i>	
001	Landfill Non-methane Organic Compounds (NMOC)
012	Flare
013	1.4 MW Reciprocating Internal Combustion Engine (RICE) No. 1
014	1.4 MW RICE No. 2
006	Generator/CI Engine
016	Dewatering Pump/CI Engine
017	Dewatering Pump/CI Engine
018	Dewatering Pump/CI Engine
019	Dewatering Pump/CI Engine

SUBSECTION C. APPLICABLE REGULATIONS.

Based on the Title V air operation permit renewal application received August 2, 2010, this facility is not a major source of hazardous air pollutants (HAP). A summary of applicable regulations is shown in the following table.

Regulation	EU No(s).
40 CFR 60 Subpart A, General Provisions	001, 012, 013, 14
40 CFR 60 Subpart CC, Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills	001, 012
40 CFR 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills	001, 002, 001, 012

SECTION I. FACILITY INFORMATION.

40 CFR 60 Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	013, 014
40 CFR 61 Subpart M, National Emissions Standard for Asbestos	001
40 CFR 63, Subpart A, General Provisions	001, 006, 012, 013, 14, 016, 017, 018, 019
40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	001, 006, 012, 013, 014, 016, 017, 018, 019
62-296.320, F.A.C.	001, 012, 013, 14
62-296.370, F.A.C.	001, 012, 013, 14
62-213.440, F.A.C.	001, 012, 013, 14
62-213.205, F.A.C.	001, 012, 013, 14
62-210.370, F.A.C.	001, 012, 013, 14
62-210.300, F.A.C.	001, 012, 013, 14
62-213.420, F.A.C.	001, 012, 013, 14
62-297.310, F.A.C.	001, 012, 013, 14
62-4.160, F.A.C.	001, 012, 013, 14
62-296.100, F.A.C.	001, 012, 013, 14

SECTION II. FACILITY-WIDE CONDITIONS.

The following conditions apply facility-wide to all emission units and activities:

FW1. Appendices. The permittee shall comply with all documents identified in Section IV, Appendices, listed in the Table of Contents. Each document is an enforceable part of this permit unless otherwise indicated. [Rule 62-213.440, F.A.C.]

EMISSIONS AND CONTROLS

FW2. Not federally Enforceable. Objectionable Odor Prohibited. No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An “objectionable odor” means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rule 62-296.320(2) and 62-210.200(Definitions), F.A.C.]

FW3. General Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed-necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]

{Permitting Note: Nothing is deemed necessary and ordered at this time.}

FW4. General Visible Emissions. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]

FW5. Unconfined Particulate Matter. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction; alteration; demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:

- a. Spraying water on roadways as needed for fugitive dust suppression.
- b. Planting of vegetation on landfill slopes.

[Rule 62-296.320(4)(c), F.A.C.; and, proposed by applicant in Title V air operation permit application received August 20, 2010.]

ANNUAL REPORTS AND FEES

See Appendix RR, Facility-wide Reporting Requirements for additional details.

FW6. Annual Operating Report. The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by April 1st of each year. [Rule 62-210.370(3), F.A.C.]

FW7. Annual Emissions Fee Form and Fee. The annual Title V emissions fees are due (postmarked) by March 1st of each year. The completed form and calculated fee shall be submitted to: Major Air Pollution Source Annual Emissions Fee, P.O. Box 3070, Tallahassee, Florida 32315-3070. The forms are available for download by accessing the Title V Annual Emissions Fee On-line Information Center at the following Internet web site: <http://www.dep.state.fl.us/air/emission/tvfee.htm>. [Rule 62-213.205, F.A.C.]

FW8. Annual Statement of Compliance. The permittee shall submit an annual statement of compliance to the compliance authority at the address shown on the cover of this permit within 60 days after the end of each calendar year during which the Title V permit was effective. [Rules 62-213.440(3)(a)2. & 3. and (3)(b), F.A.C.]

SECTION II. FACILITY-WIDE CONDITIONS.

- FW9.** Prevention of Accidental Releases (Section 112(r) of CAA). If and when the facility becomes subject to 112(r), the permittee shall:
- Submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to: RMP Reporting Center, Post Office Box 10162, Fairfax, VA 22038, Telephone: (703) 227-7650.
 - Submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.
[40 CFR 68]

TESTING REQUIREMENTS

- FW10.** Sulfur Content Testing. The owner or operator shall comply with the following requirements:
- Frequency.* The landfill gas shall be analyzed for site specific sulfur content [total reduced sulfur (TRS)] during each federal fiscal year (October 1 – September 30).
 - Analysis Reporting.* Sample analysis results shall be reported as SO₂ emission factors in terms of lb/MMscf of landfill gas, as total reduced sulfur (TRS) and H₂S in terms of ppmv.
 - Compliance and Annual Reporting.* Compliance and annual reporting shall use the SO₂ emission factors determined from the sample analysis results.
 - Test Method.* The test method for sulfur analysis shall be EPA Method 16, Semicontinuous Determination of Sulfur Emissions from Stationary Sources. The gas sample shall be collected from the gas collection system header pipe at a location before all flares and engines. The gas sample collected for the analyses shall be a composite sample and collected under normal operating conditions (i.e., with valves open for all operating cells). [Permit No. 0150075-011-AC]

RECORDS AND REPORTS

- FW11.** SO₂ Emissions. The permittee shall submit results and corresponding data for the site specific SO₂ emission factor with 45 days of gas sampling to the permitting authority. Copies of the results shall also be submitted to the Compliance Authority. [Permit No. 0150075-011-AC]
- FW12.** PSD Applicability. If the actual emissions of any regulated pollutant authorized by this permit combined with permit no. 0150075-009-AC and 0150075-011-AC are greater than 249 TPY this will initiate preconstruction review requirements pursuant to Rule 62-212.400, F.A.C., as if construction of these emissions units had not yet begun. [Rules 62-212.400, and 62-4.070(3), F.A.C., Permit No. 0150075-011-AC]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Landfill NMOC

The specific conditions in this section apply to the following emissions unit:

EU No.	Brief Description
001	Landfill Non-methane Organic Compounds (NMOC)

EU001 is NMOC generated from waste disposal at the Class I landfill. The landfill has a design capacity of approximately 7.5 million Mg. Since the landfill capacity is equal to or greater than 2.5 million Mg by mass, the facility is subject to the regulations of 40 CFR 60 Subpart WWW and therefore, must periodically estimate the NMOC emissions to determine when the facility will be subject to the control equipment, monitoring, and reporting requirements of 40 CFR 60 Subpart WWW. The facility has installed an active gas collection and control system as part of a renewable energy project before being required to do so by Subpart WWW. Based on Tier 2 landfill gas (LFG) sampling and analysis in 2007, NMOC emissions were estimated to be less than 50 Mg per year for the next five years. Based upon the Title V air operation permit renewal application received the NMOC concentration was calculated to be less than 50 Mg per year through year 2015.

ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS

- A.1. Hours of Operation.** This emissions unit may operate continuously (8,760 hours/year). [Rule 62-210.200(PTE), F.A.C.]
- A.2. Emissions Unit Operating Rate Limitation After Testing.** See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

EMISSION LIMITATIONS AND STANDARDS

- A.3. Collection System.** When the NMOC emission rate is equal to or greater than 50 Mg per year, the owner or operator shall submit a collection and control system design plan prepared by a professional engineer to the South District office within 1 year. The South District office shall review the information submitted in the design plan and either approve it, disapprove it or request that additional information be submitted. The design plan shall include the following:
 - a. The collection and control system design plan shall document that the existing system meets the requirements of 40 CFR 60 Subpart WWW [60.752(b)(2)] or specify plans to upgrade the system to achieve compliance with 40 CFR 60 Subpart WWW.
 - b. The collection and control system shall meet the design requirements of 40 CFR 60.752(b)(2)(ii).
 - c. The collection and control system shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of 40 CFR 60.753 through 60.758 proposed by the owner or operator.
 - d. The collection and control system shall either conform with specifications for active collection systems in 40 CFR 60.759 or include a demonstration to the South District’s office satisfaction for the sufficiency of the alternative provisions to 40 CFR 60.759.[40 CFR 60.752(b)]

TEST METHODS AND PROCEDURES

- A.4. Test Methods.** Required tests shall be performed in accordance with the following reference methods:

Method	Description of Method and Comments
2E	Determination of Landfill Gas; Gas Production Flow Rate
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography
25	Determination of Total Gaseous Non-Methane Organic Emissions as Carbon
25C	Determination of Non-Methane Organic Compounds in Municipal Solid Waste Landfill Gases

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Landfill NMOC

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [62-297.401, F.A.C., 40 CFR 60 Subpart WWW]

A.5. Non-methane Organic Compounds (NMOC).

- a. As required per 40 CFR 60.757(b), the owner or operator shall calculate the NMOC emission rate annually using the procedures 40 CFR 60.754(a)(3) and equation in 40 CFR 60.754(a)(1)(i). Samples shall be collected from the common header pipe before the gas moving or condensate removal equipment. A minimum of three samples must be collected from the header pipe. The landfill owner or operator shall recalculate the NMOC mass emission rate using the equation in 40 CFR 60.754(a)(1)(i) and use the average NMOC concentration from the collected samples instead of the default value of 4000 ppmv as hexane.
 - i. If the NMOC emission rate is equal to or greater than 50 Mg per year, the owner or operator shall:
 - 1. Submit a collection and control system design plan prepared by a professional engineer to the South District office within 1 year per Specific Condition **A.3.**, or
 - 2. Determine the site specific methane generation rate constant and recalculate the NMOC emission rate using the site specific methane generation rate using the procedures specified in 40 CFR 60.754(a)(4). The calculation of the methane generation rate constant is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations.
 - a. The resulting site specific methane generation rate constant (k) and the site-specific NMOC concentration shall be used in the emission rate calculation in 40 CFR 60.754(a)(1)(i) instead of the default values.
 - b. The revised NMOC emission rate report based on the provisions of 40 CFR 60.754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Department within 1 year of the first calculated emission rate exceeding 50 Mg per year. [40 CFR 60.754(a)(4)]
 - c. If the NMOC emission rate is equal to or greater than 50 Mg/yr, the owner or operator shall comply with 60.752(b)(2). If the NMOC emission rate is less than 50 Mg per year, the owner or operator shall comply with specific condition **A.4.a.ii.**
 - ii. If the resulting NMOC emission rate is less than 50 Mg per year, the owner or operator shall submit a periodic estimate for the emission rate report as provided in 40 CFR 60.757(b)(1) and retest the site-specific NMOC concentration every 5 years using the methods specified in 40 CFR 60.754 and **A.4.a.** above.

[40 CFR 60.752; 40 CFR 60.756; 40 CFR 60.757]

A.6. NMOC Calculations. The owner or operator shall calculate the NMOC emission rate using the formula and procedures provided in 60.754(a). [40 CFR 60.752; 40 CFR 60.754, 40 CFR 60.757(b)]

A.7. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

RECORDKEEPING AND REPORTING REQUIREMENTS

A.8. Reporting Schedule. The following reports and notifications shall be submitted to the Compliance Authority:

Report	Reporting Deadline	Related Condition(s)
Amended Design Capacity Report	Within 90 days of an increase in the maximum design capacity.	40 CFR 60.757(a)(3)
NMOC Emission Rate Report	Annually (See Specific Condition A.10.)	40 CFR 60.757(b)

[Rule 62-213.440, F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Landfill NMOC

- A.9. Other Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements.
- A.10. Annual NSPS Reporting.** The owner or operator shall submit an annual NMOC emission rate report that meets the following requirements of 40 CFR 60.757(b):
- a. The NMOC emission rate report shall contain an annual or 5 year estimate of the NMOC emission rate calculated using the formula and procedures provided in 40 CFR 60.754(a).
 - i. If the estimated NMOC emission rate is less than 50 Mg per year in each of the next five consecutive years the owner or operator may elect to submit an estimate of the NMOC emission rate for the next 5 year period in lieu of the annual report.
 1. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year for the 5 years for which an NMOC emission rate is estimated.
 2. All data and calculation upon which this estimate is based shall be provided to the South District.
 3. This estimate shall be revised at least once every 5 years.
 4. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5 year estimate, a revised 5 year estimate shall be submitted to the South District. The revised estimate shall cover the 5 year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate. [40 CFR 60.757(b)].
 - b. The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5 year emissions.
[Rule 40 CFR 60.757(b)]
- A.11. Recordkeeping.** Each owner or operator shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered 40 CFR 60.752(b), the current amount of solid waste in-place, and the year-by-year acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable. [40 CFR 60.758(a)]
- A.12. NSPS Reporting and Recordkeeping.** The owner or operator shall submit all reports and notifications required by 40 CFR 60 Subpart WWW. These reports and notifications shall be submitted in accordance within the timeframes established in Subpart WWW. [62-4.070(3), F.A.C.]

OTHER REQUIREMENTS

- A.13. Federal Rule Requirements.** In addition to the specific conditions listed above, this emissions unit is also subject to the requirements under 40 CFR 60 Subpart A, General Provisions, 40 CFR 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills, 40 CFR 61 Subpart M, National Emissions Standard for Asbestos, 40 CFR 63 Subpart A, General Provisions, 40 CFR 63 Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. [Rule 62-213.440, F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Flare

The specific conditions in this section apply to the following emissions unit:

EU No.	Brief Description
012	Flare

EU012 is a 2000 scfm flare but is limited to the maximum landfill gas generation rate of 1924 scfm. The flare has a stack height of 30 feet, an exit diameter of 1 foot, a 1,400 °F exit temperature, and a maximum dry standard flow rate 2,000 dscfm.

ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS

- B.1. Permitted Capacity.** The flow to the flare (EU012) shall not exceed 1,924 scfm. The combined total flow to the flare and the proposed three IC engines (EU013, EU014 and EU015; permitted under 0150075-011-AC) shall not exceed 1,924 scfm. [Rule 62-210.200(PTE), F.A.C.; Permit No. 0150075-009-AC]
- B.2. Restricted Operation.** The hours of operation are not limited (8760 hours per year). [Rule 62-210.200(PTE), F.A.C.; Permit No. 0150075-009-AC]
- B.3. Emissions Unit Operating Rate Limitation After Testing.** See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

MONITORING OF OPERATIONS

- B.4. Gas Flow.** The total LFG flow to the flare shall be continuously monitored. The permittee shall install, operate and maintain LFG flow meters to continuously measure the total LFG flow to the flare. The flow meters measuring the LFG flow to the flare shall be installed such that the meters only measure the LFG flow going to the flare. The flow meters shall be install such that they do not measure any LFG flow to the engines (EU013, EU014 and EU015;). [Permit No. 0150075-009-AC]

{Permitting Note: EU015 is authorized to be constructed under Permit No. 0150075-011-AC. EU015 is not yet constructed.}

EMISSIONS STANDARDS

Unless otherwise specified, the averaging time for Specific Condition **B.5.** is based on the specified averaging time of the applicable test method.

- B.5. Visible Emissions.** The flare shall be operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours. [Permit No. 0150075-009-AC; and 40 CFR 60.18(c)]

TESTING REQUIREMENTS

- B.6. Test Methods.** Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
22	Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares

The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; and Appendix A of 40 CFR 60; Permit No. 0150075-009-AC]

- B.7. Annual Compliance Tests.** During each federal fiscal year (October 1st to September 30th), the emissions unit shall be tested to demonstrate compliance with the emissions standards for **VE.** [Rule 62-297.310(7)(a)4, F.A.C.; Permit No. 0150075-009-AC]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Flare

- B.8. Compliance Tests Prior To Renewal.** Compliance tests shall be performed for **VE** once every 5 years. The tests shall occur prior to obtaining a renewed operating permit to demonstrate compliance with the emission limits in Specific Conditions **B.5.** [Rules 62-210.300(2)(a) and 62-297.310(7)(a), F.A.C.]
- B.9. Test Requirements.** The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. The minimum visible emission test duration shall be 2 hours. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.; Permit No. 0150075-009-AC]
- B.10. Common Testing Requirements.** Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

RECORDS AND REPORTS

- B.11. Test Reports:** The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(8), F.A.C.; Permit No. 0150075-009-AC]
- B.12. Other Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements.

OTHER REQUIREMENTS

- B.13. Federal Rule Requirements.** In addition to the specific conditions listed above, this emissions unit is also subject to the requirements under 40 CFR 60, Subpart A – General Provisions. [Rule 62-213.440, F.A.C.; Permit No. 0150075-009-AC]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection C. New RICE

This section of the permit addresses the following emissions units.

ID No.	Emission Unit Description
013	1.4 MW Reciprocating Internal Combustion Engine (RICE) No. 1
014	1.4 MW RICE No. 2

Each EU013 and EU014 is a GE Jenbacher (Model Number JGC 420 GS-L.L) 1.4 MW non-emergency four stroke lean burn (4SLB) spark ignition (SI) reciprocating internal combustion engine (RICE). Each engine has a maximum power output of 1,966 brake horsepower (bhp) and a maximum gas flow rate of 412 scfm. The engines will burn methane gas generated from the landfill. A gas treatment system will be used to condition the methane gas from the landfill before being burned in the engines. Each engine has a stack with the following parameters: 15 feet high, 0.83 feet exit diameter, 954 °F. exit temperature, 10% water vapor and 412 dscfm maximum dry standard flow rate. The serial number for EU013 is 1024108. The serial number for EU014 is 1024123.

{Permitting Note: A manufacturer’s certification will not be provided to these engines. These emissions units are regulated under Rule 62-210.300, F.A.C., Permits Required, 40 CFR 60, Subpart A – General Provisions, 40 CFR 60, Subpart JJJJ – Standards of Performance for Spark Ignition Internal Combustion Engines, 40 CFR 63, Subpart A – General Provisions, and 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engine.}

EQUIPMENT

- C.1. Reciprocating Internal Combustion Engines (RICE).** EU013 and EU014 are each a 1.4 MW landfill gas-fired reciprocating internal combustion engine for the generation of up to 2.0 MW of electricity. The maximum power generation rating of each engine shall be 1,966 brake horsepower (bhp). [Permit No. 0150075-011-AC]
- C.2. Treatment System.** The LFG treatment system consisting of gas compression (via blowers), filtration (particulate removal via 1 micron filters), and chilling (liquids removal). The gas treatment system shall not be equipped with atmospheric vents. [Permit No. 0150075-011-AC]

ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS

- C.3. Permitted Capacity.**
 - a. *Gas Flow.* The maximum gas flow to each engine shall not exceed 412 scfm based on a monthly average. The combined maximum total LFG flow to the engines [EU013, EU014, and EU015 (not constructed)] and the flare (EU012) shall not exceed 1,924 scfm based on a twelve month rolling average.
 - b. *Heat Input.* The maximum heat input rate for each engine (EU013 and EU014) shall not exceed 14.76 MMBtu/hr.[Permit No. 0150075-011-AC and Rule 62-210.200(PTE), F.A.C.]

{Permitting Note: EU015 is authorized to be constructed under Permti No. 0150756-011-AC. EU015 has not been constructed and has not demonstrated compliance with the requirements and emissions limitations under Permit No. 0150075-011-AC. EU015 is not permitted or authorized to operate under this permit.}
- C.4. Authorized Fuel.** The only fuel authorized to be burned is methane (from landfill gas). The use of any other fuel will require a modification to this permit. [Permit No. 0150075-011-AC and Rule 62-210.200(PTE), F.A.C.]
- C.5. Hours of Operation.** The hours of operation of are not limited (8760 hours per year). [Rule 62-210.200(PTE), F.A.C.; Permit 0150075-011-AC]
- C.6. Air to Fuel Ratio.** The owner or operator shall operate each engine at the manufacturer’s recommended air-to-fuel ratio. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control devise to minimize emissions at all times. [Permit 0150075-011-AC and 40 CFR 60.4243(g)]

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- C.7. Fail-Safe Block Valve.** The owner or operator shall install and maintain an automatic fail-safe block valve on each engine. The fail-safe block valve must stop the flow of the LFG in the event of an engine failure. [Permit 0150075-011-AC]
- C.8. Excess LFG from Engine.** Excess LFG not used as fuel in an engine must be flared in accordance with the requirements of 40 CFR 60 Subpart WWW and in accordance with the conditions of this permit. [Permit 0150075-011-AC]
- {Permitting Note: The maximum gas flow to all emissions units (EU012, EU013, EU014, and EU015) shall not exceed 1,924 acfm.}*
- {Permitting Note: EU015 is authorized to be constructed under Permits No. 0150756-011-AC. EU015 has not been constructed and has not demonstrated compliance with the requirements and emissions limitations under Permit No. 0150075-011-AC. **EU015 is not permitted or authorized to operate under this permit.**}*
- C.9. Treatment System Filtration.** The owner or operator shall install, operate and maintain one micron filters to remove particulate matter in the LFG fuel pretreatment process. [Permit 0150075-011-AC]
- C.10. Elapsed Operating Time.** The owner or operator shall equip each engine with a non-resettable elapse time meter to indicate and be recorded, in cumulative hours, the elapsed engine operating time. [Permit 0150075-011-AC]
- C.11. Nameplates.** The owner or operator shall always maintain nameplates on each engine that includes the serial numbers of the engine. [Permit 0150075-011-AC]
- C.12. Engine Maintenance and Operation.** The owner or operator must, to the extent practicable, maintain and operate the engines in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 60.4243(b)(2)(ii); Permit 0150075-011-AC]
- C.13. Emissions Unit Operating Rate Limitation After Testing.** See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

MONITORING OF OPERATIONS

- C.14 Gas Flow.** The LFG flow to the emissions units at the facility shall be continuously monitored. The owner or operator shall install, operate and maintain a LFG flow meter to continuously measure the total LFG flow to the two engines. The flow meter shall be installed such that it does not include LFG flow to the flare (EU012). The flow rate for each engine shall be calculated each month by dividing the measured monthly total LFG flow (from flow meter) to all engines by each individual engine's hours of operation during the month (as determined by the elapsed time meters). [Permit 0150075-011-AC]
- {Permitting Note: This facility shall be equipped with two LFG flow meters: one for the engines, and one for the flare (EU012). Each flow meter shall only measure flow to its designated emissions unit(s). The flow meter to the engines (EU013 and EU014) shall also continuously measure the LFG flow to EU015 authorized to be constructed under 0150075-011-AC but not yet constructed.}*

EMISSIONS STANDARDS

Unless otherwise specified, the averaging times for Specific Conditions **C.15.- C.18.** are based on the specified averaging time of the applicable test method.

- C.15. Carbon Monoxide (CO).** The CO emissions from each individual engine (EU013, EU014 and EU015) shall not exceed:
- 13.0 pounds per hour (lbs/hr),
 - 57.0 TPY, and
 - 3.0 g/bhp-hr.
- [Permit No. 0150075-011-AC]

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{Permitting Note: Per 40 CFR 60.4233(e) and 40 CFR 60.4243(b) and (b)(2), this facility is subject to the CO emissions limitation of 5.0 g/HP-hr or 610 ppmvd @ 15% O₂ of 40 CFR 60 Subpart JJJJ, however, the permittee requested the more stringent CO emissions limitations in Specific Condition C.15.}

- C.16. Nitrogen Oxides (NO_x).** NO_x emissions from each individual engine (EU013, EU014 and EU015) shall not exceed:
- a. 2.6 lbs/hr,
 - b. 11.4 TPY, and
 - c. 0.6 g/bhp-hr.
- [Permit No. 0150075-011-AC]

{Permitting Note: Per 40 CFR 60.4233(e) and 40 CFR 60.4243(b) and (b)(2), this facility is subject to the NO_x emissions limitation of 2.0 g/HP-hr or 150 ppmvd @ 15% O₂ of 40 CFR 60 Subpart JJJJ, however, the permittee requested the more stringent NO_x emissions limitations in Specific Condition C.16.}

- C.17. Volatile Organic Compounds (VOC).** VOC emissions from each individual engine (EU013, EU014 and EU015) shall not exceed:
- a. 4.3 lbs/hr,
 - b. 19.0 TPY, and
 - c. 1.0 g/bhp-hr.
- [Permit No. 0150075-011-AC; 40 CFR 60.4233(e) and 40 CFR 60.4243(b) and (b)(2)]

- C.18. Visible Emissions (VE).** Visible emissions shall not exceed 10% opacity. [Permit 0150075-011-AC]

- C.19. LFG Flow Compliance.** Compliance with the permitted capacity for maximum gas flow rate of 412.0 scfm for each engine shall be demonstrated monthly. Compliance with the total LFG flow of 1,924 scfm to all three engines and to the flare combined shall be demonstrated by a consecutive twelve monthly rolling average. [Permit 0150075-011-AC]

- C.20. Subpart ZZZZ Emission Limits.** The owner and operator must comply with the emission standards in Table 1 to 40 CFR 60 Subpart JJJJ. The owner and operator must operate and maintain the stationary SI ICEs that achieve the emission standards as required in 40 CFR 60.4233 over the entire life of the engine. [40 CFR 60.4233(e), 60.4234 and 60.4243(b)(2)]

{Permitting Note: This permit requires more stringent NO_x and CO emissions limitations than those required under Subpart JJJJ.}

TESTING REQUIREMENTS

- C.21. Test Methods.** Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1	Sample and Velocity Traverses for Stationary Sources
1A	Sample and Velocity Traverses for Stationary Sources with Small Stacks
2	Determination of Stack Gas Velocity and Volumetric Flow Rate
3	Gas analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight
3A	Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources
3B	Gas Analysis for The Determination of Emission Rate Correction Factor or Excess Air
4	Determination of Moisture Content in Stack Gases
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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Method	Description of Method and Comments
10	Determination of Carbon Monoxide Emissions from Stationary Sources
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography
19	Determination of Sulfur Dioxide removal Efficiency and Particulate, Sulfur Dioxide and Nitrogen Oxides Emission Rates
25A	Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer
320	Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy
ATM Method D6522-00(2005)	Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers
ASTM D6348-03	Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy

The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; and Appendix A of 40 CFR 60; Permit 0150075-011-AC]

- C.22. Common Testing Requirements.** Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]
- C.23. Annual Compliance Tests.** During each federal fiscal year (October 1st to September 30th), each emissions unit shall be tested to demonstrate compliance with the emissions standards for **CO**, **NO_x**, **VOC**, and **VE**. Annual compliance tests for CO, NO_x and VOC shall meet the testing requirements in accordance with 40 CFR 60 Subpart JJJJ. [Rule 62-297.310(7)(a)4, F.A.C.; Permit 0150075-011-AC]
- C.24. Compliance Tests Prior To Renewal.** Compliance tests shall be performed for **CO**, **NO_x**, **VOC**, and **VE** once every 5 years. The tests shall occur prior to obtaining a renewed operating permit to demonstrate compliance with the emission limits in Specific Conditions **C.15 – C.18**. [Rules 62-210.300(2)(a) and 62-297.310(7)(a), F.A.C.]
- C.25. Performance and Compliance Tests.** For each emissions unit, the permittee shall conduct performance testing every 8,760 hours or three (3) years, whichever comes first to demonstrate compliance with emission standards and requirements of 40 CFR 60 Subpart JJJJ, including 40 CFR 60.4243(b)(2)(ii) and 40 CFR 60.4244.. Performance and compliance tests shall be conducted in accordance with the requirements of 40 CFR 60.4244, Subpart JJJJ. Performance tests must be conducted within 10 percent of 100 percent peak (or highest achievable) load and according to the requirements in 40 CFR 60.8 and under the specific conditions that are specified in 40 CFR 60 Subpart JJJJ, Table 2. [40 CFR 60.4243(b)(2)(iii) and 40 CFR 60.4244; Permit 0150075-011-AC]
- {Permitting Note: The base frequency test date for subsequent performance test is date of initial compliance testing(December 15, 2011) and the base frequency hours is the the actual run hours on the engines upon completion of performance testing which is 1366 hours for EU013 and 1317 for EU014.}*
- C.26. Performance Test Requirements per Subpart JJJJ.** The owner and operator must conduct performance tests according to the following the procedures:
- a. Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in 40 CFR 60.8 and under the specific conditions that are specified by Table 2 to Subpart JJJJ.

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- b. You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.
- c. You must conduct three separate test runs for each performance test required in this section, as specified in 40 CFR 60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.
- d. To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 1})$$

Where:

ER = Emission rate of NO_x in g/HP-hr.

C_d= Measured NO_x concentration in parts per million by volume (ppmv).

1.912×10⁻³ = Conversion constant for ppm NO_x to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

- e. To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 2})$$

Where:

ER = Emission rate of CO in g/HP-hr.

C_d= Measured CO concentration in ppmv.

1.164×10⁻³ = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

- f. For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 3})$$

Where:

ER = Emission rate of VOC in g/HP-hr.

C_d= VOC concentration measured as propane in ppmv.

1.833×10⁻³ = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

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- g. If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_M}{C_{Ai}} \quad (\text{Eq. 4})$$

Where:

RF_i= Response factor of compound i when measured with EPA Method 25A.

C_{Mi}= Measured concentration of compound i in ppmv as carbon.

C_{Ai}= True concentration of compound i in ppmv as carbon.

$$C_{i_{corr}} = RF_i \times C_{i_{meas}} \quad (\text{Eq. 5})$$

Where:

C_{i_{corr}}= Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

C_{i_{meas}}= Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{P_{eq}} = 0.6098 \times C_{i_{corr}} \quad (\text{Eq. 6})$$

Where:

C_{P_{eq}}= Concentration of compound i in mg of propane equivalent per DSCM.

[40 CFR 60.4244]

- C.27. Test Notifications and Requirements.** The permittee shall notify the Compliance Authority in writing at least 30 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [40 CFR 60.8; Permit 0150075-011-AC]

RECORDS AND REPORTS

- C.28. Other Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements.
- C.29. Initial Notification.** The owner and operator must submit an initial notification as required in 40 CFR 60.7(a)(1). The notification must include the following information:
- a. Name and address of the owner or operator;
 - b. The address of the affected source;
 - c. Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
 - d. Emission control equipment; and
 - e. Fuel used.
- [40 CFR 60.4245(c); Permit 0150075-011-AC]
- C.30. Test Reports.** The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit. The serial numbers shall be recorded for each emission unit test, and submitted with each test report. [Rule 62-297.310(8), F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection C. New RICE

- C.31. Engine Operating Time.** The owner or operator shall record and maintain each engine's daily elapsed operating time. [Permit 0150075-011-AC]
- C.32. Continuous Monitoring and Recordkeeping.** The permittee shall continuously measure and record the following:
- Gas Flow.* The total landfill gas flow to the engines.
 - Power Generation.* The gross electrical power generation for each engine.
[Permit 0150075-011-AC]
- C.33. Monthly Records.** The permittee shall maintain the following records on a monthly basis:
- Operating Hours (Engine Run Hours).* The monthly hours of operation of each engine.
 - Gas Flow.* The monthly LFG flow to each engine and the LFG flow consecutive twelve 12 month rolling average to each engine.
 - Power Generation.* The monthly gross electrical power generation in kw-hr for each engine.
[Permit 0150075-011-AC]
- C.34. Maintenance Plan and Records.** The owner or operator must keep a maintenance plan and records of conducted maintenance for each engine. [40 CFR 60.4243(b)(2)(ii) and 40 CFR 60.4245(a)(2); Permit 0150075-011-AC]
- C.35. Recordkeeping.** The owner and operator must keep records of all notifications submitted to comply with 40 CFR Subpart JJJJ and all documentation supporting any notification. [40 CFR 60.4245(a)(1); Permit 0150075-011-AC]
- C.36. Emission Standards Documentation.** Owners and operators of all stationary SI ICE must keep documentation that the engine meets the emission standards If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40 CFR 60.4243(a)(2). [40 CFR 60.4245(a)(3)]
- C.37. Federal Rule Requirements.** The permittee shall comply with notification, reporting, and recordkeeping requirements under 40 CFR 60 Subparts A and JJJJ and 40 CFR 63 Subparts A and ZZZZ. [Permit 0150075-011-AC; 40 CFR 60 Subpart JJJJ and Subpart ZZZZ]

OTHER REQUIREMENTS

- C.38. Federal Rule Requirements.** In addition to the specific conditions listed above, these emissions units are subject to requirements contained in 40 CFR 60, Subpart A – General Provisions, 40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Gas Turbines, and 40 CFR 63, Subpart A – General Provisions and 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. [Rule 62-213.440, F.A.C.; Permit 0150075-011-AC]
- C.39. Alternative Method of Operation.**
- Authorized Engine Replacements.* At the time that any of the emissions units (EU013, EU014 and EU015) need to be replaced, the owner or operator may permanently replace the emissions unit with an engine that shall be the identical make, model, and maximum heat input. All replacement engines shall meet the applicable requirements of 40 CFR 60 Subpart JJJJ and 40 CFR 63 Subpart ZZZZ and the conditions of this permit.
 - Notifications.*
 - At least 15 days prior to installation of the replacement engine the owner or operator shall provide written notification to the Department's South District office. The notification shall contain the following information:
 - Emission unit number that is being replaced.
 - Replacement engine's information including make, model, year of manufacturer, serial number, maximum engine power, maximum heat input, maximum gas flow, and engine displacement.
 - Date of commencement of installation.

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection C. New RICE

4. Documentation that the engine does or does not meet the definition of “*reconstruction*.”
Reconstruction is defined as the replacement of components of an affected or a previously non-affected source to such an extent that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source.
 5. Applicable requirements and regulations.
 6. The notification shall be signed by the facility’s responsible official.
- ii. The owner or operator shall provide written notification of placing the engine into operation to the Department’s South District office within seven (7) days after placing the replacement engine into operation.
- c. *Testing Requirements.*
 - i. Within 30 days after the replacement engine is placed into operation at the Zemel Road Solid Waste Management Facility the owner or operator shall conduct initial performance and compliance testing on the engine. Performance and compliance testing shall be in accordance with Specific Conditions 19 and 21 of this subsection. The owner or operator may request for approval of an extension of time up to an additional 30 days to conduct the required testing. The request for approval of an extension of time must be submitted in writing to the South District office.
 - ii. If the replacement engine’s performance/compliance test result in emissions of any pollutant greater than 249 TPY for all combined emission units [EU012, EU013, EU014 and EU015 (authorized to be constructed under Permit No. 0150075-011-AC but not yet constructed)] then the facility shall submit an air construction permit for the replacement engine and preconstruction review requirements pursuant to Rule 62-212.400, F.A.C., as if construction of these emissions units had not yet begun will be applicable .
 - d. *Recordkeeping.* In accordance with 40 CFR 60.4245(a)(1), records of all maintenance conducted on the replacement engine shall be kept and maintained on site at the facility.
 - e. *Removal of Emission Unit.* The engine that is being replaced shall be removed from the facility site.
 - f. *Other Requirements.* The replacement engine shall be subject to all conditions of this permit.
- [Permit 0150075-011-AC, 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection D. Existing Emergency and Non/Emergency RICE

The following specific conditions apply to the following emissions units:

EU No.	Brief Description
006	Generator/CI engine (non-emergency)
016	Dewater pumps/CI engine
017	Dewater pumps/CI engine
018	Dewater pumps/CI engine
019	Dewater pumps/CI engine (non-emergency)

The following table provides important details for these emissions units.

E.U. ID	Horse-power	Date of Construction	Model Year	Primary Fuel	Type of Engine	Serial #	Date of last mod. or reconstr.
006	60	2004	1999	Diesel	Generator/CI engine	0113267/05	N/A
016	72	1987	1977	Diesel	Generator/CI engine	695	N/A
017	72	1996	1987	Diesel	Generator/CI engine	-----	N/A
018	72	1998	1997	Diesel	Generator/CI engine	1441	N/A
019	72	2007	2005	Diesel	Generator/CI engine	-----	N/A

EU006 is an existing 60 HP (2.40 L displacement) generator/ CI engine (manufacturer : Newage, model no. : BC.I185F1. This engine operates 520 hours per year of which 24 hours are emergency situation hours, and 144 hours are for maintenance and testing. Per 40 CFR 63 Subpart ZZZZ, this engine is a non-emergency engine.

EU016 is an existing 72 HP (4.20 L displacement) generator/ CI engine (manufacturer : Griffin Dewater, model no. is 400). This engine operates 0 hours per year of which 0 hours are emergency situation hours, and 0 hours are for maintenance and testing. Per 40 CFR 63 Subpart ZZZZ, this engine is an emergency engine.

EU017 is an existing 72 HP (4.20 L displacement) generator/ CI engine (manufacturer : D & D Machine, model no. is 400). This engine operates 0 hours per year of which 0 hours are emergency situation hours, and 0 hours are for maintenance and testing. Per 40 CFR 63 Subpart ZZZZ, this engine is an emergency engine.

EU018 is an existing 72 HP (4.20 L displacement) generator/ CI engine(manufacturer : Sloan Pump, model no. is 1062/2400). This engine operates 0 hours per year of which 0 hours are emergency situation hours, and 0 hours are for maintenance and testing. Per 40 CFR 63 Subpart ZZZZ, this engine is an emergency engine.

EU019 is an existing 72 HP (4.20 L displacement) generator/ CI engine (manufacturer : Portable Pump, model no. is 1104C-44. This engine operates 8448 hour per year of which 0 hours are emergency situation hours, and 22 hours are for maintenance and testing. Per 40 CFR 63 Subpart ZZZZ, this engine is a non-emergency engine.

{Permitting Note: These emissions units, compression ignition (CI) engines, are regulated under 40 CFR 63, Subpart ZZZZ, NESHAP for Stationary RICE adopted in Rule 62.204.800(11)(b), F.A.C. This permit section addresses “existing” stationary CI RICE less than or equal to 500 HP that are located at an area source of HAP and that have not been modified or reconstructed after 6/12/2006. Unless the RICE is modified or reconstructed after 7/11/2005, NSPS 40 CFR 60, Subpart IIII, will not apply. The permittee shall comply with the following emissions and operating limitations no later than May 3, 2013.}

ESSENTIAL POTENTIAL TO EMIT (PTE) PARAMETERS

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection D. Existing Emergency and Non/Emergency RICE

- D.1. Compliance Date.** The owner or operator must comply with the applicable emission limitations and operating limitations of 40 CFR 63 Subpart ZZZZ no later than May 3, 2013. [40 CFR 63.6595(a)]
- D.2. Area Sources That Become Major Sources.** If facility increases its emissions or its potential to emit such that it becomes a major source of HAP, the following compliance dates apply:
- Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with 40 CFR 63 Subpart ZZZZ upon startup of the affected source.
 - Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions 40 CFR 63 Subpart ZZZZ that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.
[40 CFR 63.6595(b)]
- D.3. Requirements for emergency stationary RICE.** (This condition only applies to EU016, EU017 and EU018.) The owner or operator must operate the emergency stationary RICE according to the requirements in conditions **D.3. a.** through **D.3.b.**. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in conditions **D.3. a.** through **D.3.c.** is prohibited. If the owner or operator does not operate the engine according to the requirements in conditions **D.3. a.** through **D.3.c.**, the engine will not be considered an emergency engine under Subpart ZZZZ and will need to meet all requirements for non-emergency engines under Subpart ZZZZ.
- Emergency Situations.* There is no time limit on the use of emergency stationary RICE in emergency situations.
 - Maintenance and Testing.* The owner or operator may operate an emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.
 - Non-emergency Situations.* You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph (f)(1)(iii), as long as the power provided by the financial arrangement is limited to emergency power.
[40 CFR 63.6640(f)]
- D.4. Idle Time.** The owner or operator must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection D. Existing Emergency and Non/Emergency RICE

minutes, after which time the emission standards applicable to all times other than startup in Table 2d to 40 CFR 63 Subpart ZZZZ apply. [40 CFR 63.6625 (h)]

EMISSION LIMITATIONS AND OPERATING REQUIREMENTS

- D.5. Work Management Practice Standards.** The owner or operator must comply with the following requirements under Table 2d of 40 CFR 63 Subpart ZZZZ:
- a. *Oil.* Change oil and filter every 1,000 hours of operation or annually, whichever comes first. [40 CFR 63.6603(a), Table 2.d.1. and 2.d.4]
 - b. *Air Cleaner.* Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first. [40 CFR 63.6603(a), Table 2.d.1. and 2.d.4]
 - c. *Hoses/Belts.* Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63.6603(a), Table 2.d.1. and 2.d.4]
 - d. *Idle Time and Start-up Time.* Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. **This does not apply to EU016, EU017, or EU018.** [40 CFR 63.6603(a), Table 2.d.1. and 2.d.4]
 - d. *Operation and Maintenance.* The owner or operator must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop their own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions: [40 CFR 63.6625(e) and 40 CFR 63, Table 9].
 - e. *Oil Analysis.* The owner or operator has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Table 2d to 40 CFR 63 Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2d to 40 CFR 63 Subpart ZZZZ. 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 engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator 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)]

MONITORING OF OPERATIONS

- D.6. Hour Meter.** The owner or operator must install a non-resettable hour meter if one is not already installed. [40 CFR 63.6625(f)]

COMPLIANCE

- D.7. Continuous Compliance.** The owner or operator must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 2d to 40 CFR 63 Subpart ZZZZ that apply according to methods specified in Table 6 to 40 CFR 63 Subpart ZZZZ. [40 CFR 63.6640(a) and (b)]
- D.8. Continuous Compliance.** The owner or operator must be in compliance with the emission limitations and operating limitations in 40 CFR 63 Subpart ZZZZ that apply at all times.
- a. At all times the owner or operator must operate and maintain any affected source, including associated air pollution control equipment 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

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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 and maintenance records, and inspection of the source.

[40 CFR 63.6605(a) and (b)]

RECORDKEEPING REQUIREMENTS

D.9. Recordkeeping. The owner or operator must keep the following records:

a. *Notification, Performance and Compliance Records*

- i. A copy of each notification and report that is submitted to comply with Subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance Status that is submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.6655(a)]
- ii. The owner or operator must keep the records required in Table 6 of 40 CFR 63 Subpart ZZZZ to show continuous compliance with each emission or operating limitation that applies. [63.6655(d)]
- iii. **(This condition applies only to EU016, EU017 and EU018)** The owner or operator owns or operate must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response. [40 CFR 63.6655(f)]
- iv. Records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii). [40 CFR 63.6655(a)]

b. *Malfunction Records.*

- i. 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)]
- ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)]

c. *Maintenance Records.*

- i. The owner or operator must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan. [40 CFR 63.6655(e)]
- ii. Records of all required maintenance performed on the air pollution control and monitoring equipment. [40 CFR 63.6655(a)]

D.10. Record Retention. The owner or operator records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). As specified in 40 CFR 63.10(b)(1), records must be kept for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The owner or operator must 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 40 CFR 63.10(b)(1). [40 CFR 63.6660]

REPORTING REQUIREMENTS

D.11. Reporting Deviations. The owner or operator must report each instance in which you did not meet each emission limitation or operating limitation in Tables 2d to 40 CFR 63 Subpart ZZZZ that apply. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in 63.6650. If the catalyst is changed, the owner or operator must

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reestablish the values of the operating parameters measured during the initial performance test. When reestablishing the values of the operating parameters, the owner or operator must also conduct a performance test to demonstrate that the required emission limitation applicable to your stationary RICE are being met. [40 CFR 63.6640(a) and (b)]

- D.12. Emergency Situation.** If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable. [40 CFR 63 Table 2d, footnote 2]

OTHER REQUIREMENTS

- D.13. Federal Requirements.** In addition to the specific conditions listed above, these emissions units are subject to requirements under 40 CFR 63, Subpart A – General Provisions and 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. [Rule 62-213.440, F.A.C.]

APPENDIX

Appendix A, Glossary.

Appendix I, List of Insignificant Emissions Units and/or Activities.

Appendix NSPS, Subpart A – General Provisions.

Appendix NSPS, Subpart CC – Emissions Guidelines and Compliance Times for Municipal Solid Waste Landfills.

Appendix NSPS, Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills.

Appendix NSPS, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Appendix NESHAP, Subpart A – General Provisions.

Appendix NESHAP, Subpart M – National Emissions Standard for Asbestos.

Appendix NESHAP, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

Appendix RR, Facility-wide Reporting Requirements.

Appendix TR, Facility-wide Testing Requirements.

Appendix TV, Title V General Conditions.