Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

PERMITTEE

Industrial Power Generating Company, LLC (INGENCO)
2250 Dabney Road
Richmond, VA 23230

Secondary Responsible Official (Energy Section):
Mr. Robert L. Greene
Environmental Compliance Manager, INGENCO

Primary Responsible Official:
Mr. German Hernandez, Manager Environmental Affairs
Miami-Dade Solid Waste Management – Miami-Dade County

Permit No. 0250623-007-AC
PSD-FL-408
Miami-Dade Solid Waste Management
South Dade Landfill Modification
Project: Installation of Landfill Gas Engines
Expires: May 1, 2014

PROJECT AND LOCATION

This is the final air construction permit, which authorizes the installation and operation of 24 dual-fuel landfill gas-fired internal combustion engines with a nominal rated capacity of 8 megawatts of electricity. The project is located at the Miami-Dade County Solid Waste Management South Dade Landfill at 24000 SW 97th Avenue, Miami, Miami-Dade County, which is classified as Standard Industrial Classification No. 4953 for Refuse Systems. UTM coordinates are Zone 17; 565.51 km East and 2825.11 km North.

This final permit is organized into the following sections: Section I (General Information); Section II (Administrative Requirements); Section III (Emissions Unit Specific Conditions); Section IV (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section IV of this permit. As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C., for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

_____ _____

Michael P. Halpin, P.E., Director
Division of Air Resource Management

Date

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit with Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on _____ to the persons listed below.

Robert L. Greene, INGENCO (rgreene@ingenco.com)
German Hernandez, Miami-Dade Solid Waste Management (germanh@miamidade.gov)
James A. Susan, P.E., Fishbeck, Thompson, Carr & Huber, Inc. (jasusan@ftch.com)
Lee Hoefert, DEP-SED (lee.hoefert@dep.state.fl.us)
Mallika Muthiah, DERM (muthiahm@miamidade.gov)
Kathleen Forney, EPA Region 4 (forney.kathleen@epa.gov)
Dee Morse, NPS (dee_morse@nps.gov)
Vickie Gibson, DEP-BAR for reading file (victoria.gibson@dep.state.fl.us)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

_____ _____
(Clerk) (Date)

FACILITY DESCRIPTION

Miami-Dade Solid Waste Management (MDSWM) operates the South Dade Landfill Facility, which is a Class I municipal solid waste (MSW) landfill located in Miami, Florida. Methane-rich landfill gas (LFG) produced from the decomposition of disposed waste materials is currently collected by a gas recovery system and combusted flares to reduce non-methane organic compounds (NMOC).

PROJECT DESCRIPTION

Under contract with MDSWM, INGENCO will construct and operate an electrical generation plant at the South Dade Landfill Facility. To recover useful energy from the LFG that is currently flared, available LFG will be diverted to INGENCO to fuel the new electrical generation plant, which will consist of:

- LFG treatment equipment for dewatering, filtration and compression.
- Twenty-four reciprocating internal combustion engines, each coupled to a 350 kilowatt (kW) electrical generator. Under base load operating conditions, the plant will generate a total of 8 megawatts (MW, nominal) of electricity and will be interconnected to the Florida Power and Light distribution network through a nearby power line.
- Unregulated ancillary equipment that supports the electric generation plant consists of:
  - Diesel fuel tanks (preliminary design of two 12,000 gallon tanks) to provide diesel oil storage for the engines.
  - One lube oil tank (approximately 1,000 gallons).
  - One used lube oil tank (approximately 1,000 gallons) and moisture conditioning equipment.
  - If necessary, a package boiler (approximately 0.2 million British thermal units per hour (MMBtu/hr)) for providing heat to the building and a fuel oil tank (approximately 275 gallons) for the boiler will be installed.
  - Evaporative cooling towers.

The engines will be arranged in four groups of six engines. The engines will be located near the existing LFG collection and control system and connect from the existing line to a blower/compressor, which will draw methane-rich LFG from the gas collection system for delivery to the new electrical generation plant. The exhaust from each group of six engines will be ducted together to a single stack. Therefore, there will be a total of four stacks in the electric generation plant.

As a result of this major modification, the project is subject to PSD preconstruction review for carbon monoxide (CO), particulate matter/particulate matter with an aerodynamic diameter of 10 microns or less (PM/PM_{10}) and nitrogen oxides (NOx).

NEW EMISSION UNITS

This permit authorizes construction and installation of the following new regulated emission units:

ID	Emission Unit (EU) Description
003	Twenty four dual-fuel fired compression ignition reciprocating internal combustion engine/generator sets (Detroit Diesel Series 60) with a total nominal electrical generation capacity of 8 MW.

REGULATORY CLASSIFICATION

The existing South Dade Landfill Facility is subject to the following major regulatory classifications.

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility does not operate any units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is an existing Title V major source of air pollution in accordance with Chapter 213, F.A.C. (The facility has a capacity of greater than 2.5 million cubic meters and 2.5 million megagrams and operates under a current Title V air operation permit.)
- The facility is an existing major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

The existing South Dade Landfill Facility is subject to the following federal regulations.

- 40 Code of Federal Regulations (CFR) 60, Subpart A, New Source Performance Standards (NSPS), General Provisions;
- 40 CFR 60, Subpart WWW, NSPS for Municipal Solid Waste Landfills;
- 40 CFR 60, Subpart Cc, Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills;
- 40 CFR 63, Subpart A, National Emission Standards for Hazardous Air Pollutants (NESHAP), General Provisions; and
- 40 CFR 63, Subpart AAAA, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste Landfills.

Installation of the new electrical generation plant is subject to PSD preconstruction review in accordance with Rule 62-210.200, F.A.C. and subject to Best Available Control Technology (BACT) determinations for CO, NO_X and PM/PM_{10} emissions.

APPENDICES

The following Appendices are attached as part of this permit.

Appendix A. Citation Formats and Glossary of Common Terms

Appendix B. General Conditions

Appendix C. Common Conditions

Appendix D. Common Testing Requirements

Appendix E. Summary of BACT Determinations

SECTION II. ADMINISTRATIVE REQUIREMENTS (FINAL PERMIT)

1. Regulating Agencies: All documents related to applications for permits to operate, reports, tests, minor modifications and notifications shall be submitted to the Department's Southeast District (SED) Office, 400 North Congress Avenue, Suite 200, West Palm Beach, Florida 33401. All applications for permits to construct or modify emissions units subject to the Prevention of Significant Deterioration requirements should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection, 2600 Blair Stone Road, MS 5505, Tallahassee, Florida 32399-2400 (phone number 850/717-9000).

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications should be submitted to the Department's Southeast District Office, 400 North Congress Avenue, Suite 200, West Palm Beach, Florida 33401 and a copy to the Department of Environmental Resources Management, Air Quality Management Division, 701 Northwest 1st Court, Suite 400, Miami, Florida 33136.

3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); and Appendix D (Common Testing Requirements); and Appendix E (Summary of BACT Determinations).

4. General Conditions: The owner and operator are subject to and shall operate under the attached General Permit Conditions B.1 through B.15 listed in Appendix B of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

5. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.

6. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, 62-297 and the Code of Federal Regulations Title 40, Parts 60 and 63, adopted by reference in the Florida Administrative Code (F.A.C.) regulations. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

7. Expiration: Notwithstanding the source obligation requirements in Rule 62-212.400(12)(a), F.A.C., the permittee may, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit. [Rule 62-4.090, F.A.C]

8. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213.420, F.A.C.]

9. Source Obligation: Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between constructions of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit. [Rule 62-212.400(12)(a), F.A.C.].

10. BACT Determination: For phased construction projects, the BACT determination shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of BACT for the source. [40 CFR 52.21(j)(4)]
11. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

Subsection A. LFG Engines (EU-003)

The specific conditions listed in this subsection apply to the following emission unit.

EU No.	Emission Unit Description
003	This emissions unit consists of 24 Detroit Diesel Series 60 dual-fuel fired compression ignition reciprocating internal combustion engines. Each engine is a 6-cylinder engine with a total displacement of 12.7 liters. Each engine has a maximum rating of 550 brake horsepower (bhp) and is coupled to a 350 kW generator (nominal rating) for the generation of up to a total of 8 MW of electricity. Each engine will fire landfill gas with diesel and/or biodiesel. The LFG will be processed by a gas treatment system prior to combustion in the engines. The engines will be arranged in four groups of six engines: groups A, B, C and D. The exhaust from each group of six engines will be ducted together to a single stack, for a total of four stacks.

EQUIPMENT DESIGN AND WORK PRACTICES

1. Engines: The permittee is authorized to install and operate 24 Detroit Diesel Series 60 dual-fuel fired compression ignition reciprocating internal combustion engines. Each engine is a 6-cylinder engine with a total displacement of 12.7 liters. Each engine has a maximum rating of 550 bhp and is coupled to a 350 kW generator (nominal rating) for the generation of up to a total of 8 MW of electricity. The maximum rating when coupled to the electrical generator is 469 bhp. Each engine will fire LFG with diesel/biodiesel as a startup and stabilizing fuel. The LFG will pass through a gas treatment system prior to combustion in the engines. The engines will be arranged in four groups of six engines: groups A, B, C and D. Each group of engines will share a common stack.

   The maximum heat input rate of each engine is 3.67 million British thermal units (MMBtu) per hour.

   [Design and Rule 62-4.070(3), F.A.C.]

2. LFG Treatment System: The permittee shall design, install, operate and maintain a LFG Treatment System including equipment for: gas compression (blowers/compressors), de-watering (knock-out and cooling system) and particulate removal (filtration). Specifically, the permittee shall design, install, maintain and operate 1 micron primary and polishing filters to remove particulate matter from the LFG prior to combustion in the engines. The LFG treatment system shall not be equipped with atmospheric vents. LFG shall be directed to the new engines, the existing flares or some other appropriate treatment or control system. [Rule 62-212.400, F.A.C.]

3. Ancillary Equipment. The permittee is authorized to install the following unregulated ancillary equipment to support the electrical generation plant:

   a. Diesel fuel tanks (preliminary design of two 12,000 gallon tanks) to provide diesel oil storage for the engines.

   b. One lube oil tank (approximately 1,000 gallons).

   c. One used lube oil tank (approximately 1,000 gallons) and moisture conditioning equipment.

   d. If necessary, a package boiler (approximately 0.2 million British thermal units per hour (MMBtu/hr)) for providing heat to the building and a fuel oil tank (approximately 275 gallons) for the boiler will be installed.

   e. Evaporative cooling towers.

   [Application No. 0250623-007-AC]

4. Fuel Specifications: The following fuels are authorized for each engine: LFG, diesel and biodiesel. Based on the proposed engine type and design, diesel or biodiesel shall be co-fired with LFG to stabilize combustion. The maximum sulfur content of diesel and biodiesel is 0.0015 % by weight.

{Permitting Note: For this type of compression ignition dual-fuel engine, the LFG fraction target range is 92% to 94%, with the remainder being diesel or biodiesel. The permittee expects a minimum LFG fraction of 90% with an upper level LFG fraction of 98%. The LFG fraction can be adjusted by the number of engines in operation. The estimated LFG heating value is 536 Btu per standard cubic feet (scf) and landfill gas usage of 114 scf per minute (scfm) per engine. The approximate heating value for diesel is 137,000 Btu/gallon and for biodiesel the range is 130,000 to 145,000 Btu/gallon.} [Rule 62-212.400, F.A.C.]

5. Fuel Monitors: The permittee shall install, calibrate, operate and maintain monitoring devices to record the flow (with totalizer) of each authorized fuel and the hours of operation (non-resettable elapsed time meter). [Rule 62-4.070(3), F.A.C.]

6. LFG Flaring: 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 LFG in the event of an engine failure. Excess LFG not used as fuel in an engine must be flared or directed to some other appropriate treatment or control system in accordance with the requirements of NSPS Subpart WWW in 40 CFR 60. [Rule 62-4.070, F.A.C.]

EMISSION LIMITING AND PERFORMANCE REQUIREMENTS

7. Hours of Operation: The hours of operation for the engines are not limited (8,760 hours per year). [Rule 62-210.200, F.A.C.]

8. LFG Fraction: Upon completing startup of each engine, the engines shall operate at a LFG fraction of at least 90%. [Rules 62-4.070(3) and Rule 62-212.400(BACT), F.A.C.]

9. Nitrogen Oxides (NOx): The emission rate of NOx from each engine shall not exceed 0.8 lb/MMBtu and 2.9 lb/hour (equivalent to 2.8 grams/bhp-hour). [Rule 62-212.400(BACT), F.A.C.]

10. Carbon Monoxide (CO): The emission rate of CO from each engine shall not exceed 1.0 lb /MMBtu and 3.7 lb/hour (equivalent to 3.6 grams/bhp-hour). [Rule 62-212.400, F.A.C.]

11. Particulate Matter/Particulate Matter less than 10 microns (PM/PM_{10}): Emissions of PM/PM_{10} shall be minimized by the following work practice standards: installing, maintaining and operating the LFG Treatment System that meets the filtration specification; the firing of diesel/biodiesel that meets the maximum sulfur specification; and, as determined by EPA Method 9, visible emissions from each engine exhaust shall not exceed 10% opacity. *{Permitting Note: Based on these work practice standards, the expected maximum PM/PM_{10} emissions from each engine is 0.075 lb/MMBtu, 0.28 lb/hour and 0.26 grams/bhp-hour.}* [Rule 62-212.400(BACT), F.A.C.]

12. Sulfur Dioxide (SO_2): Sulfur dioxide emissions from all engines shall not exceed 39.0 tons during any consecutive 12 months. Emissions shall be calculated based on the representative sulfur content of each fuel and the actual monthly fuel consumption rate of each fuel based on the following:

    a. LFG: The representative sulfur content for a given month shall be the sulfur content determined from sampling and analysis within the same semiannual period.

    b. Diesel/Biodiesel: The representative sulfur content for a given month shall be the permitted maximum sulfur content or the actual sulfur content if provided for the most recent fuel delivery.

    c. Fuel Consumption: The monthly fuel consumption shall be determined from the fuel flow monitors.

    Compliance with the SO_2 emissions cap shall be determined by summing the calculated monthly SO_2 emissions from each fuel based on stoichiometry for a given 12-month period. *{Permitting Note: The project avoids PSD review based on this emissions cap.}* [Rule 62-212.400(12)(Source Obligation), F.A.C.]

13. Hydrochloric Acid (HCl): Hydrochloric acid emissions from the facility shall not exceed 8.1 tons during any consecutive 12 months. Emissions shall be calculated based on the representative chlorine content of LFG and the actual monthly fuel consumption rate of the engines and the amount flared based on the following:

a. LFG: The representative chlorine content for a given month shall be the chlorine content determined from sampling and analysis within the same semiannual period.

b. Fuel Consumption: The monthly fuel consumption shall be determined from the fuel flow monitors on the engines as well as the flares.

Compliance with the HCl emissions cap shall be determined by summing the calculated monthly HCl emissions from LFG based on stoichiometry for a given 12-month period. *{Permitting Note: This emissions cap ensures that the facility remains an area source of HAP emissions with regard to NESHAP Subpart ZZZZ in 40 CFR 63 (less than 10 tons per year of any single HAP and less than 25 tons per year for the combination of all HAP)}.* [Applicant Request and Rule 62-4.070(3), F.A.C.]

EXCESS EMISSIONS

14. Excess Emissions Allowed: Excess CO and NOx emissions (as specified in this subsection) resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing best operational practices to minimize emissions are adhered to and:

a. To the extent practicable, the operator shall strive to complete engines startups within 30 minutes;

b. Upon completing startup, each engine shall operate with a LFG fraction at 90% or greater; and

c. The duration of excess emissions due to malfunctions shall be minimized but in no case exceed two hours in any 24-hour period.

[Rule 62-210.700(1), F.A.C.]

TEST METHODS AND PROCEDURES

15. Stack Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Note: The method shall be based on a continuous sampling train.}
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)

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]

16. LFG Composition Analysis: The following methods shall be used to satisfy the sampling/analysis of LFG:

a. Methane Content: Portable analyzer.

b. Sulfur Content: ASTM Method D5504-01 or equivalent.

c. Chlorine Content: Modified EPA Method TO-15 or equivalent.

d. The LFG shall be collected and transported in an appropriate canister (e.g. SUMMA®, Bottle-Vac Sampler or equivalent).

[Rule 62-4.070(3), F.A.C.]

17. Initial Compliance Tests: Within 60 days of achieving the permitted capacity, but no later than 180 days after initial startup (first fire), the permittee shall have emissions tests conducted on the engines to demonstrate compliance with the CO, NOx and opacity standards of this permit. To demonstrate compliance with the standards, the permittee shall test one group of engines. All engines that are available and physically capable of operating at the required LFG fraction shall be operating for the test. During the initial compliance tests, the permittee shall take a representative sample of LFG as described below, which shall be analyzed for the methane content, sulfur content and chlorine content. The heating value shall be calculated from the methane content measured by the portable analyzer. The analytical data on the heating value, sulfur content and chlorine content shall represent the LFG fired for that semiannual period. [Rules 62-4.070 and 62-297.310(7), F.A.C.]

18. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), the permittee shall have emissions tests conducted on the engines to demonstrate compliance with the CO, NOx and opacity standards of this permit. To demonstrate compliance with the standards, the permittee shall test one engine group of six engines. Annual tests shall be rotated such that each engine group is tested before a group is repeated. All engines that are available and physically capable of operating at the required LFG fraction shall be operating for the test. The results of the most recent annual compliance conducted within the appropriate time period may be used to satisfy the requirement to test prior to renewal of the operation permit. During the annual compliance tests, the permittee shall take a representative sample of LFG as described below, which shall be analyzed for methane content, sulfur content and chlorine content. The analytical data on the heating value, sulfur content and chlorine content shall represent the LFG fired for that semiannual period. [Rules 62-4.070 and 62-297.310(7), F.A.C.]

19. Engine Test Conditions: The required compliance tests shall be conducted when operating at permitted capacity in dual-fuel mode with a LFG gas fraction of at least 90%. Permitted capacity is defined as 80% to 100% of the maximum electrical production rate for each engine (350 kW). [Rule 62-297.310, F.A.C.]

20. LFG Sampling/Analysis: For each calendar semiannual period (January – June and July – December), the permittee shall obtain a sample of LFG and have an analysis for sulfur and chlorine. Semiannual samples shall be taken at least five months apart. Each gas sample shall be collected under normal operating conditions (i.e., with valves open for all operating cells) by appropriate canisters (e.g. SUMMA® Bottle-Vac Sampler or equivalent). Based on Rule 62-297.310(7)(b)(Special Compliance Tests), F.A.C., the Compliance Authority may request additional gas sampling and analyses. Results shall also be reported as SO_2 and HCl emission factors in terms of lb/million standard cubic feet (lb/MMscf) of landfill gas. [Rules 62-210.200 and 62-212.400, F.A.C.]

21. Diesel/Biodiesel Sampling/Analysis: For each delivery of diesel and/or biodiesel fuel, the permittee shall obtain a fuel vendor certification (or bill of lading) identifying the actual or maximum sulfur content. The permittee shall maintain records documenting the sampling/analysis methods used by the vendor to determine the sulfur content. Optionally, the permittee can obtain a sample for a delivery and have it analyzed for the sulfur content. Fuel sulfur sampling and analysis shall be determined by appropriate methods including the following (or equivalent): ASTM D 4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products; ASTM D 129-91; ASTM D 2622-94; or ASTM D 4294-90; or the latest version of the methods. [Rule 62-4.070(3), F.A.C.]

RECORDKEEPING, REPORTING AND MONITORING REQUIREMENTS

22. Stack Test Reports: The required test report shall be filed with the Department as soon as practical, but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test

report, other than for an EPA or DEP Method 9 test, shall provide the applicable information identified in Rule 62-297.310(8)(c). The lower heating value, sulfur content, chlorine content, SO_2 emission factor (lb/MMscf) and HCl emission factor (lb/MMscf) shall be provided as part of the stack test report. [Rule 62-297.310(8), F.A.C.]

23. Fuel Analytical Reports: For each required fuel analysis, the permittee shall submit the analytical report to the Compliance Authority within 45 days of taking the sample. The permittee shall maintain records of the required analysis (or vendor certification) for each fuel. **[**Rule 62-4.070(3), F.A.C.]

24. Monthly Records: Within 10 days following a given month, the permittee shall calculate and record the following information in a monthly record for the given month and the consecutive 12-month rolling period:

    a. Total LFG consumption for all engines;

    b. Diesel and biodiesel consumption for all engines;

    c. Hours of operation (including any startup, shutdown or malfunction);

    d. Calculated SO_2 emissions (including supporting calculations); and

    e. Calculated HCl emissions (including supporting calculations).

    In addition the permittee shall estimate the average monthly heating value of LFG from the engine operational data. [Rule 62-4.070(3)]

NSPS AND NESHAP PROVISIONS

25. NSPS Subpart IIII: The permittee shall provide the following documentation to the Division of Air Resource Management and the Compliance Authority: verification that each of the engines was manufactured prior to April 1, 2006 (applicability deadline for NSPS Subpart IIII) and a statement that the proposed engines have not been modified nor reconstructed. This will establish the engines as existing engines that predate the NSPS Subpart IIII provisions. The permittee shall obtain a modification of this permit to install another model/type of engine. [40 CFR 60]

26. NESHAP Subpart ZZZZ Provisions: The engines are subject to the applicable provisions of NESHAP Subpart ZZZZ in 40 CFR 63, including:

    a. Change the oil and filter every 1,440 hours of operation or annually, whichever comes first;

    b. During periods of startup 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; and

    c. Maintain recordkeeping requirements found in 40 CFR 63.6655, continuous compliance in 40 CFR 63.6605 and 40 CFR 63.6640 and monitoring, installation, collection, operation and maintenance requirements in 40 CFR 63.6625(e), (h), and (j).

The provisions of this Subpart may be provided in full upon request. Emissions units subject to a specific NESHAP Subpart in 40 CFR 63 are also subject to the applicable General Provisions of Subpart A in 40 CFR 63. [40 CFR Part 63, Subpart ZZZZ, 40 CFR 66.6603, Table 2d, 40 CFR 63.6625(b), 40 CFR 63.6655, 40 CFR 63.6605, 40 CFR 63.6640 and 40 CFR 63.6625(e), (h), and (j)]