Sarasota County Board of County Commissioners
Sarasota County Central County Solid Waste Disposal Complex

Facility ID No. 1150089
Sarasota County

Title V Air Operation Permit Renewal

Permit No. 1150089-010-AV
(Renewal of Title V Air Operation Permit No. 1150089-007-AV)

Permitting Authority:

State of Florida
Department of Environmental Protection
Division of Air Resource Management
Office of Permitting and Compliance
2600 Blair Stone Road
Mail Station #5505
Tallahassee, Florida 32399-2400

Telephone: (850) 717-9000
Fax: (850) 717-9097

Compliance Authority:

Florida Department of Environmental Protection
South District
Air Resource Section
2295 Victoria Avenue Suite 364
Fort Myers, Florida 33901

Telephone: (239) 344-5600
Fax: (850) 412-0590

Title V Air Operation Permit Renewal

Permit No. 1150089-010-AV

Table of Contents

Section **Page Number**

Placard Page 1

I. Facility Information.
A. Facility Description. 2
B. Summary of Emissions Units. 2
C. Applicable Regulations. 2

II. Facility-wide Conditions. 4

III. Emissions Units and Conditions.
A. EU 001 – MSW Landfill. 6
B. EUs 010 – 012 – Three Landfill Gas Fired Engines. 12
C. EUs 014 and 015 – Stationary Compression Ignition Emergency Generators. 19

IV. Appendices. ..... See Appendix Document
Appendix A, Glossary.
Appendix I, List of Insignificant Emissions Units and/or Activities.
Appendix NESHAP, Subpart A of 40 CFR 61 – General Provisions.
Appendix NESHAP, Subpart M – National Emission Standards for Asbestos.
Appendix NESHAP, Subpart A of 40 CFR 63 – General Provisions.
Appendix NESHAP, Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines.
Appendix NSPS, Subpart A of 40 CFR 60 – General Provisions.
Appendix NSPS, Subpart WWW – Standards of Performance for MSW Landfills.
Appendix NSPS, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.
Appendix NSPS, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.
Appendix RR, Facility-wide Reporting Requirements.
Appendix TR, Facility-wide Testing Requirements.
Appendix TV, Title V General Conditions.
Appendix U, List of Unregulated Emissions Units and/or Activities.

Referenced Attachments. ..... At End
Table H, Permit History.

Florida Department of Environmental Protection

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

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

PERMITTEE:
Sarasota County Board of County Commissioners

4000 Knights Trail Road
Nokomis, Florida 34275

Permit No. 1150089-010-AV
Sarasota County Central County Solid Waste Disposal Complex
Facility ID No. 1150089
Title V Air Operation Permit Renewal

The purpose of this permit is to renew the Title V air operation permit for the above referenced facility. The existing Sarasota County Central County Solid Waste Disposal Complex (SCCCSWDC) is located in Sarasota County at 4000 Knights Trail Road, Nokomis. UTM Coordinates: Zone 17, 362.97 km East and 3009.13 km North; and Latitude: 27° 12' 00" North and Longitude: 82° 23' 00" 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, and 62-213. The above named permittee is hereby authorized to operate the facility in accordance with the terms and conditions of this permit.

1150089-010-AV Effective Date: 02/24/2016
Renewal Application Due Date: 07/11/2020
Expiration Date: 02/21/2021

David Lyle Read, P.E.
2016.02.24 12:28:41
-05'00'

For:
Syed Arif, P.E., Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

SA/dlr/pks

SECTION I. FACILITY INFORMATION.

Subsection A. Facility Description.

The SCCCSWDC includes a Municipal Solid Waste (MSW) landfill and other associated solid waste collection and disposal activities. The class I disposal landfill currently consists of a Phase I area which began accepting waste on June 5, 1998, and a Phase II expansion area. The current design capacity of the landfill phases that have been constructed (Phase I and Phase II) is 7,770,000 short tons (7,050,000 Megagrams), which is greater than 2.5 million megagrams by mass and 2.5 million cubic meters by volume. This landfill accepts waste containing asbestos and does not operate as a bioreactor. *(Note – Waste in place at the end of 2014 was 3,876,820 Mg (4,264,502 tons). It is estimated that, based on anticipated waste acceptance rates, by the end of 2020 waste in place will be 5,358,075 Mg (5,906,267 tons).)*

According to the Tier 2 testing conducted at the landfill in June of 2014, the non-methane organic compounds (NMOC) generation rate is 25.2 Mg/year, which is less than 50 Mg/year; therefore it is not subject to the collection and control system requirements of 40 CFR 60, Subpart WWW. The landfill has a voluntarily installed landfill gas (LFG) collection system, with an open candlestick flare, which became operational in May of 2010. The collected LFG is sent to three Caterpillar (CAT®) Model No. G3520C reciprocating internal combustion engines (RICE)-driven electricity generators to produce 4.8 megawatts (MW) of electricity for sale to the grid. Prior to combustion in the engines, the landfill gas is routed through a landfill gas treatment system, which includes dewatering (a moisture knock-out vessel), gas compressors and blowers, air-to-gas coolers and 1 micron particulate filtration.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities associated with the solid waste collection and disposal operations located at this site. *(See below and Appendices I, List of Insignificant Emissions Units and/or Activities and U, List of Unregulated Emissions Units and/or Activities.)*

Subsection B. Summary of Emissions Units.

EU No.	Brief Description
Regulated Emissions Units	
001	MSW Landfill
010	Lean-Burn Spark Ignition (SI) RICE
011	Lean-Burn SI RICE
012	Lean-Burn SI RICE
014	New Emergency Stationary Compression Ignition (CI) RICE (126 HP)
015	New Emergency Stationary CI RICE (201 HP)
Unregulated Emissions Units and Activities (see Appendix U, List of Unregulated Emissions Units and/or Activities)	
002	Fugitive PM/PM10 Emissions (Roads and Earthmoving Operations)
003	Yard Waste Composting Operations
005	Non-Stationary (Non-Road) Diesel Engines
016	LFG Collection System and LFG Candlestick Flare

Subsection C. Applicable Regulations.

Based on the Title V air operation permit renewal application received on July 24, 2015, this facility is a prevention of significant deterioration (PSD) major source of air pollutants in accordance with Rule 62-212.400, F.A.C., for carbon monoxide (CO), Oxides of Nitrogen (NO_x), Particulate Matter with a mean diameter of 10 micrometers and 2.5 micrometers (PM_{10} & $PM_{2.5}$). A summary of applicable regulations is shown in the following table.

Regulation	EU Nos.
Federal Rule Citations	
40 CFR 60, Subpart A, NSPS General Provisions	001, 010, 011, 012, 014, 015
40 CFR 60, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills	001
40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	014, 015
40 CFR 60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	010, 011, 012
40 CFR 61, Subpart A, NESHAP General Provisions	001
40 CFR 61, Subpart M, National Emission Standard for Asbestos	001
40 CFR 63, Subpart A, NESHAP General Provisions	014, 015
40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	014, 015
State Rule Citations	
Rule 62-4, F.A.C.: Permits	001, 010, 011, 012, 014, 015
Rule 62-204, F.A.C.: Air Pollution Control – General Provisions	
Rule 62-210, F.A.C.: Stationary Sources – General requirements	
Rule 62-212.400, F.A.C.: Prevention of Significant Deterioration	010, 011, 012
Rule 62-213, F.A.C.: Operation Permits for Major Sources of Air Pollution	001, 010, 011, 012, 014, 015
Rule 62-296, F.A.C.: Stationary Sources – Emission Standards	
Rule 62-297, F.A.C.: Stationary Sources – Emissions Monitoring	

{Permitting Note: NESHAP 40 CFR 63 Subpart AAAA (National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills) is not applicable to this facility at this time since estimated uncontrolled NMOC are less than 50 megagrams per year (40 CFR 63.1935(a)(3).}

Table of Contents

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. [Rules 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. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b), 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. Paved access roads surrounding the active disposal area;
b. Paved parking areas;
c. Prohibiting unnecessary off-road travel;
d. Application of water to paved and unpaved roads with high traffic volumes as necessary;
e. Removal of particulate matter from roads and other paved areas under the control of the permittee of the facility as necessary to prevent re-entrainment, and from buildings or work areas to prevent particulate from becoming airborne;
f. Planting and maintenance of vegetation as necessary;
g. Posting and enforcing a speed limit of 25 mph for vehicles traveling on roadways on site; and
h. Utilization of best management practices to prevent fugitive emissions from any on-site construction projects.

[Rule 62-296.320(4)(c), F.A.C.; and, proposed by applicant in Title V air operation permit renewal application received July 25, 2015.]

Annual Reports and Fees

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

FW6. Electronic Annual Operating Report and Title V Annual Emissions Fees. The information required by the Annual Operating Report for Air Pollutant Emitting Facility [Including Title V Source Emissions Fee Calculation] (DEP Form No. 62-210.900(5)) shall be submitted by April 1 of each year, for the previous calendar year, to the Department of Environmental Protection's Division of Air Resource Management. Each Title V source shall submit the annual operating report using the DEP's Electronic Annual Operating Report (EAOR) software, unless the Title V source claims a technical or financial hardship by submitting DEP Form

No. 62-210.900(5) to the DEP Division of Air Resource Management instead of using the reporting software. Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C. Each Title V source must pay between January 15 and April 1 of each year an annual emissions fee in an amount determined as set forth in subsection 62-213.205(1), F.A.C. The annual fee shall only apply to those regulated pollutants, except carbon monoxide and greenhouse gases, for which an allowable numeric emission-limiting standard is specified in the source's most recent construction permit or operation permit. Upon completing the required EAOR entries, the EAOR Title V Fee Invoice can be printed by the source showing which of the reported emissions are subject to the fee and the total Title V Annual Emissions Fee that is due. The submission of the annual Title V emissions fee payment is also due (postmarked) by April 1st of each year. A copy of the system-generated EAOR Title V Annual Emissions Fee Invoice and the indicated total fee shall be submitted to: **Major Air Pollution Source Annual Emissions Fee, P.O. Box 3070, Tallahassee, Florida 32315-3070.** Additional information is available 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. [Rules 62-210.370(3), 62-210.900 & 62-213.205, F.A.C.; and, §403.0872(11), Florida Statutes (2013)]

{Permitting Note: Resources to help you complete your AOR are available on the electronic AOR (EAOR) website at: http://www.dep.state.fl.us/air/emission/eaor. If you have questions or need assistance after reviewing the information posted on the EAOR website, please contact the Department by phone at (850) 717-9000 or email at eaor@dep.state.fl.us.}

{Permitting Note: The Title V Annual Emissions Fee form (DEP Form No. 62-213.900(1)) has been repealed. ***A separate Annual Emissions Fee form is no longer required to be submitted by March 1st each year.****}*

FW7. 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 and to the US. EPA at the address shown below within 60 days after the end of each calendar year during which the Title V air operation permit was effective. [Rules 62-213.440(3)(a)2. & 3. and (b), F.A.C.]

U.S. Environmental Protection Agency, Region 4
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303
Attn: Air Enforcement Branch

FW8. Prevention of Accidental Releases (Section 112(r) of CAA). If, and when, the facility becomes subject to 112(r), the permittee shall:

a. 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 electronically through EPA's Central Data Exchange system at the following address: https://cdx.epa.gov. Information on electronically submitting risk management plans using the Central Data Exchange system is available at: http://www2.epa.gov/rmp. The RMP Reporting Center can be contacted at: RMP Reporting Center, Post Office Box 10162, Fairfax, VA 22038, Telephone: (703) 227-7650.
b. 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]

Table of Contents

Subsection A. Emissions Unit 001

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

EU No.	Brief Description
001	MSW Landfill

This emission unit is an open MSW landfill. The class I disposal landfill currently consists of 56 acres of Phase I area which began accepting waste on June 5, 1998, and 60 acres of Phase II expansion area. Of the 60 acres of Phase II, 29 acres have waste in place as of 2014. The current design capacity of the landfill phases that have been constructed (Phase I and Phase II) is 7,770,000 short tons (7,050,000 Megagrams), which is greater than 2.5 million megagrams by mass and 2.5 million cubic meters by volume.

LFG is generated from the solid waste decomposition and is comprised of methane (CH_4), carbon dioxide (CO_2) and other minor constituents. NMOC are also generated which are the regulated pollutants for municipal solid waste landfills. At the time of issuance of this Title V permit, NMOC emissions from the landfill were less than 50 Mg/year (estimated at 25.2 Mg/year for the year 2014). Therefore, this landfill is not currently subject to the LFG collection and control system requirements of NSPS Subpart WWW.

The landfill has a voluntarily installed LFG collection and control system, with an open candlestick flare (EU 016) used to combust the collected LFG. The LFG collection system and candlestick flare control device became operational in May of 2010. The flare is designed to achieve 98% destruction efficiency of volatile organic compounds (VOC, including hazardous air pollutants (HAPs)) and NMOC. It will also assist in controlling odors from the facility. The flare was designed to combust up to 5,500 scfm of LFG collected from the landfill, and is equipped with a pilot flame fueled by propane/natural gas, a pilot monitoring thermocouple, a main flame monitoring thermocouple, an inlet flame arrestor, and a flame flashback indicator. Most of the collected LFG is sent to Landfill gas to energy (LFGTE) system, consisting of three Caterpillar (CAT®) Model No. G3520C reciprocating internal combustion engines (RICE)-driven electricity generators to produce 4.8 megawatts (MW) of electricity for sale to the grid.

The facility conducted Tier 2 testing in June of 2014, as outlined in 60.754(a)(3) of 40 CFR Part 60, Subpart WWW to determine the landfill's NMOC generation rate. The NMOC generation rate was determined to be 25.3 Mg/year. The landfill's NMOC generation rate is not expected to reach or exceed 50 MG/year in the next 5 years.

Leachate Cleanout Extraction Points Note – The leachate cleanout extraction points are connected to the LFG collection system well field. The applicant intends to operate the leachate cleanout extraction points with minimal vacuum (and sometime positive pressure) to reduce the chance for air intrusion and potential subsurface combustion.

{Permitting Note: This emissions unit is regulated pursuant to 40 CFR 60, Subpart A – General Provisions, adopted and incorporated by reference in Rule 62-204.800(8)(d), F.A.C., and 40 CFR Part 60, Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills, adopted and incorporated by reference in Rule 62-204.800(7)(b)76, F.A.C. Because asbestos-containing waste is accepted at this landfill, the facility is also subject to regulation under 40 CFR 61, Subpart M – National Emissions Standards for Asbestos, adopted and incorporated by reference in Rule 62-204.800(10)(b)8., F.A.C. This landfill is not subject to regulation under 40 CFR 63, Subpart AAAA - National Emission Standards for Hazardous Air Pollutants (NESHAP) from Municipal Solids Waste Landfills since current (and near future projections) emissions of NMOC emissions are less than 50 Mg/year.}

Link to 40 CFR 60, Subpart A Link to 40 CFR 60, Subpart WWW

Essential Potential to Emit (PTE) Parameters

A.1. Hours of Operation. This emissions unit may operate continuously (8,760 hours/year). [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

Emission Standards

A.2. NMOC Emission Rate. The owner or operator shall calculate an NMOC emission rate for the landfill using the procedures specified in 40 CFR 60.754 (see **Specific Condition A.4**.)

a. If the calculated NMOC emission rate is less than 50 megagrams per year, the owner or operator shall:
   (1) Submit an annual NMOC emissions rate report to the compliance authority, except as provided in 40 CFR60.757(b)(1)(ii) (see **Specific Condition A.6.a.**).
   (2) Recalculate the NMOC emission rate annually using the procedures specified in 40 CFR 60.754(a)(1) (see **Specific Condition A.4.**) until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed.
      (a) If the NMOC emission rate, upon recalculation, is equal to or greater than 50 megagrams per year, the owner or operator shall install a collection and control system in compliance with 40 CFR 60.752(b)(2). [Link to 40 CFR 60.752]
      (b) If the landfill is permanently closed, a closure notification shall be submitted to the Department as provided for in 40 CFR 60.757(d).

b. If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the owner or operator shall:
   (1) Submit a collection and control system design plan (see **Specific Condition A.7.**) prepared by a professional engineer to the Department within 1 year that meets the requirements of 40 CFR 752(b)(2)(i). (Link to 40 CFR 60.752)
   (2) Install a collection and control system that captures the gas generated within the landfill as required by 40 CFR60.752(b)(2)(ii)(A) or (B) and (b)(2)(iii) within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the emission rate is less than 50 megagrams per year, as specified in 40 CFR 60.757(c)(1) or (2). (see **Specific Condition A.7.**)

[40 CFR 60.752(b)]

Operational Requirements and Control Technology

A.3. Operational Standards for Active Asbestos Waste Disposal. Because this facility receives asbestos-containing waste material from: asbestos mills; manufacturing, fabricating, demolition, renovation, and spraying operations; and operations that convert asbestos-containing waste material into non-asbestos (asbestos-free) material, the owner or operator shall meet the following requirements:

a. Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of **paragraph c. or d**. of this condition must be met.

b. Unless a natural barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as follows, or the requirements of **paragraph c(1)** of this condition must be met.
   (1) Warning signs must be displayed at all entrances and at intervals of 100 m (330 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material is deposited. The warning signs must:
      (a) Be posted in such a manner and location that a person can easily read the legend; and
      (b) Conform to the requirements of 51 cm × 36 cm (20 inch×14 inch) upright format signs specified in **29 CFR 1910.145(d)(4)** and this paragraph; and
      [Note: 29 CFR 1910.145(d)(4) *Caution signs*. The standard color of the background shall be yellow; and the panel, black with yellow letters. Any letters used against the yellow background shall be black. The colors shall be those of opaque glossy samples as specified in Table 1 of ANSI Z53.1-1967 or Table 1 of ANSI Z535.1-2006(R2011), incorporated by reference in 29 CFR 1910.6. Link to 29 CFR 1910.145]
      (c) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend	Notation
Asbestos Waste Disposal Site	2.5 cm (1 inch) Sans Serif, Gothic or Block.
Do Not Create Dust	1.9 cm (3/4 inch) Sans Serif, Gothic or Block.
Breathing Asbestos is Hazardous to Your Health	14 Point Gothic.

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

(2) The perimeter of the disposal site must be fenced in a manner adequate to deter access by the general public.

(3) Upon request and supply of appropriate information, the Department will determine whether a fence or a natural barrier adequately deters access by the general public.

c. Rather than meet the no visible emission requirement of **paragraph a**. of this condition, at the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material that has been deposited at the site during the operating day or previous 24-hour period shall:

(1) Be covered with at least 15 centimeters (6 inches) of compacted non-asbestos-containing material, or

(2) Be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the Administrator. For purposes of this paragraph, any used, spent, or other waste oil is not considered a dust suppression agent.

d. Rather than meet the no visible emission requirement of **paragraph a.** of this condition, use an alternative emissions control method that has received prior written approval by the Administrator. As prescribed by 40 CFR 61.149(c)(2), to obtain approval for an alternative method, a written application must be submitted to the Administrator demonstrating that the following criteria are met:

(1) The alternative method will control asbestos emissions equivalent to currently required methods.

(2) The suitability of the alternative method for the intended application.

(3) The alternative method will not violate other regulations.

(4) The alternative method will not result in increased water pollution, land pollution, or occupational hazards.

e. For all asbestos-containing waste material received, the owner or operator shall:

(1) Maintain waste shipment records, using a form similar to that shown in Figure 4 of 40 CFR 61.149 [Link to 40 CFR 61.149], and include the following information:

(a) The name, address, and telephone number of the waste generator.

(b) The name, address, and telephone number of the transporter(s).

(c) The quantity of the asbestos-containing waste material in cubic meters (cubic yards).

(d) The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report.

(e) The date of the receipt.

(2) As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator.

(3) Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste

generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.

(4) Retain a copy of all records and reports required by this paragraph for at least five years.

f. Maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.

g. Upon closure, comply with all the provisions of 40 CFR 61.151 Link to 40 CFR 61.151.

h. Submit to the Department, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities.

i. Furnish upon request, and make available during normal business hours for inspection by the Department, all records required under this permit.

j. Notify the Administrator in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Administrator at least ten working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:

(1) Scheduled starting and completion dates.

(2) Reason for disturbing the waste.

(3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Administrator may require changes in the emission control procedures to be used.

(4) Location of any temporary storage site and the final disposal site.

[29 CFR 1910.145(d)(4), 40 CFR 61.149(c)(2), and 40 CFR 61.154]

Test Methods and Procedures

A.4. Calculation of the NMOC Emission Rate. The landfill owner or operator shall calculate the NMOC emission rate using the following equation:

$$M_{NMOC} = \sum_{i=1}^{n} 2\,k\,L_o M_i \left(e^{-kt_i}\right)\left(C_{NMOC}\right)\left(3.6\times10^{-9}\right)$$

Where,

M_{NMOC} = Total NMOC emission rate from the landfill, megagrams per year

K = methane generation rate constant, year^{-1} = 0.05

L_o = methane generation potential, cubic meters per megagram solid waste = 170 cubic meters per megagram

M_i = mass of solid waste in the ith section, megagrams

t_i = age of the ith section, years

C_{NMOC} = concentration of NMOC, parts per million by volume as hexane = 4000 parts per million (ppm) by volume as hexane

3.6×10^{-9} = conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if documentation of the nature and amount of such wastes is maintained. [40 CFR 60.754(a)(1)(i)]

Recordkeeping and Reporting Requirements

A.5. Reporting Schedule. The following reports and notifications shall be submitted to the Compliance Authority:

Report	Reporting Deadline	Related Condition(s)
NMOC Emission Rate Reports	Initially and annually thereafter	**A.6**
Collection and Control System Design Plan	Within 1 year of exceeding 50 megagrams	**A.7.**
Facility Closure Report	Within 30 days of Waste Acceptance Cessation	**A.8.**

[Rule 62-213.440(1)(b), F.A.C.]

A.6. NMOC Emission Rate Reports. The owner or operator shall submit an NMOC emission rate report to the Department annually, except as provided for in in **paragraphs a.** or **c.** of this condition. The Department may request such additional information as may be necessary to verify the reported NMOC emission rate.

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 **Specific Condition A.4.** If the estimated NMOC emission rate as reported in the annual report to the Department is less than 50 megagrams per year in each of the next 5 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. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Department. This estimate shall be revised at least once every 5 years. 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 Department. 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.

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.

c. The owner or operator is exempted from the requirements of **paragraphs a.** and **b.** of this condition, after the installation of a collection and control system in compliance with 40 CFR60.752(b)(2) (see **Specific Condition A.2.**), during such time as the collection and control system is in operation and in compliance with 40 CFR 60.753 and 60.755.

[40 CFR 60.757(b)]

A.7. Collection and Control System Design Plan. Each owner or operator subject to the provisions of §60.752(b)(2)(i) (see **Specific Condition A.2b.(1)**) shall submit a collection and control system design plan to the Department within 1 year of the first report required under 40 CFR 60.757(b) (see **Specific Condition A.6.**) in which the emission rate equals or exceeds 50 megagrams per year, except as follows:

a. If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in 40 CFR 60.754(a)(3) and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year. [Link to 40 CFR60, Subpart WWW]

b. If the owner or operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in §60.754(a)(4), and the resulting NMOC emission rate is less than 50 Mg/yr, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time

as the emissions rate calculation results in an exceedance. 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 megagrams per year.

[40 CFR 60.757(c)]

A.8. Facility Closure Report. The permittee shall submit a closure report to the Department within 30 days of waste acceptance cessation. The Department may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. Link to 40 CFR 258.60. If a closure report has been submitted to the Department, no additional wastes may be placed into the landfill without filing a notification of modification as described under §60.7(a)(4). [40 CFR 60.757(d)]

A.9. Asbestos Records and Reports. The permittee shall maintain records and reports in accordance with 40 CFR 61.154(e) and for a period of at least five years (see **Specific Condition A.3.e**.). [40 CFR 61.154(e)]

A.10. Asbestos Location Records. The permittee shall maintain, until closure, location records of the asbestos containing waste subject to 40 CFR 61.154 in accordance with 40 CFR 61.154(f) (see **Specific Condition A.3.f**.). [40 CFR 61.154(f)]

A.11. Records Retention. The permittee shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report that subjected the landfill to the requirements of 40 CFR Part 60, Subpart WWW, the current amount of solid waste in-place, and the year-by-year waste 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. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

Table of Contents

Subsection B. Emissions Units 10, 11, and 12

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

EU No.	Brief Description
010 - 012	Three lean-burn, spark-ignited reciprocating internal combustion engine/generator sets (Caterpillar Model G3520C) fired with landfill gas.

The LFG collected is used to fuel three lean-burn reciprocating internal combustion engine/generator sets. The engine/generator sets are designed to deliver a combined nominal 4.8 MW of power to the electrical grid. Prior to combustion in the engines, the LFG is routed through a landfill gas treatment system, which includes dewatering (a moisture knock-out vessel), gas compressors and blowers, air-to-gas coolers and 1 micron particulate filtration. Exhaust gas from each engine exits through an individual stack connected to the engine exhaust manifolds. A noise muffler is installed on each engine exhaust stack. Each engine exhaust stack is 1.5 feet in diameter with a volumetric flow rate of 13,700 actual cubic feet per minute (acfm). The fuel combustion system exhausts and noise mufflers are located on the roof of the single building that houses the engines. The existing flare (EU 016) is retained in its current location and used as necessary to control residual LFG not fired in the engines.

The following table provides pertinent details for these engines:

Engine Brake HP	Date of Manufacture	Model Year	Displacement cubic inches	Engine Manufacturer	Model No.
2,242	2014	2014	5,248	Caterpillar	G3520C

{Permitting Note: In accordance with Rule 62-212.400(PSD), F.A.C., the above engines are subject to Best Available Control Technology (BACT) determinations for the following pollutants: Carbon Monoxide (CO), oxides of Nitrogen (NO_X) and particulate matter with a mean diameter of 10 micrometers and 2.5 micrometers ($PM_{10}/PM_{2.5}$). Other emissions standards and performance restrictions specified in this permit allow the emission units to avoid PSD preconstruction review for volatile organic compound (VOC), NMOC, and sulfur dioxide (SO_2). This emissions unit is also regulated pursuant to 40 CFR 60, Subpart A – General Provisions, adopted and incorporated by reference in Rule 62-204.800(8)(d), F.A.C.; 40 CFR 60; Subpart JJJJ - Standards of Performance for Stationary Spark Ignition (SI) Internal Combustion Engines, adopted and incorporated by reference in Rule 62-204.800(8)(b)81, F.A.C.; 40 CFR 63, Subpart A – General Provisions, adopted and incorporated by reference in Rule 62-204.800(11)(d)(1), F.A.C.; and 40 CFR 63, Subpart ZZZZ, adopted and incorporated by reference in Rule 62-204.800(8)(11)(b)82, F.A.C. Pursuant to 40 CFR 63.6590(b)(2), because the engines are new engines firing landfill gas and located at a major source of HAP, they are only subject to the limited requirements of 40 CFR 63.6625(c), 63.6650(g) and 63.6655(c). These engines do not have to meet the emissions limitations and operating limitation of 40 CFR 63, Subpart ZZZZ.}

<u>Essential Potential to Emit (PTE) Parameters</u>

B.1. <u>Permitted Capacity</u>. Each landfill gas engine shall have a maximum power rating of 2,242 bhp at 100% load (approximately 16.61 MMBtu/hour). The electrical generator set has a nominal power rating of 1,600 kilowatts.

a. Each engine shall be equipped with an air-to-fuel ratio controller and electronic ignition timing to maintain efficient fuel combustion.

b. Each engine shall be equipped with an automatic fail-safe block valve which must be designed to stop the flow of landfill gas in the event of an engine failure. Excess landfill gas not fired in the engines shall be flared or free vented until the facility is required to meet the applicable collection and control system requirements in accordance with NSPS Subpart WWW in 40 CFR 60.

[Rule 62-212.400(PSD), F.A.C.; 40 CFR 60.4243(g); and, Permit No. 1150089-008-AC/PSD-FL-422]

{Permitting Note: The heat input rate is based on 100% load (2,242 bhp), a nominal landfill gas heating value of 500 British thermal units per standard cubic foot (Btu/scf) and an approximate landfill gas firing rate of 554 scfm per engine.}

B.2. Hours of Operation. Operation of the new engine/generator sets is not limited (8,760 hours per year). [Permit No. 1150089-008-AC/PSD-FL-422.]

B.3. Authorized Fuel. Only landfill gas shall be fired in the engine/generator sets. [Permit No. 1150089-008-AC/PSD-FL-422.]

Control Technology and Operational Requirements

B.4. Landfill Gas Treatment System. The permittee shall operate a landfill gas treatment system that includes initial gas dewatering (moisture knock-out vessel), gas compressors and blowers, air-to-gas coolers and particulate removal. The particulate filtration system shall be designed to remove particles down to 1 micron via primary and polishing filters. The gas treatment system shall not be equipped with atmospheric vents. [Rule 62-212.400(PSD), F.A.C.; and Permit No. 1150089-008-AC/PSD-FL-422.]

B.5. Minimize HAP Emissions. The permittee shall operate these engines in a manner which reasonably minimizes HAP emissions. [40 CFR 63.6625(c)]

B.6. Operation and Maintenance. The permittee must operate and maintain these engines to achieve the emissions limits in **Specific Conditions B.7.b., B.8.b.** and **B.10.b.** over the entire life of the engines. [40 CFR 60.4234]

Emission Limitations and Standards

B.7. Oxides of Nitrogen. The emissions of NO_X from each engine/generator set shall not exceed:

a. 0.6 gram per brake horsepower hour (g/bhp-hour) and 3.0 pound/hour (lb/hour). [Rule 62-212.400(BACT), F.A.C.; and, Permit No. 1150089-008-AC/PSD-FL-422]
b. 2.0 g/HP-hr or 150 ppmvd at 15% O_2. [40 CFR 60.4233(e) and Table 1]

B.8. Carbon Monoxide. The emissions of CO from each engine/generator set shall not exceed:

a. 3.5 g/bhp-hour and 17.3 lb/hour. [Rule 62-212.400(BACT), F.A.C.; and, Permit No. 1150089-008-AC/PSF-FL-422]
b. 5.0 g/HP-hr or 610 ppmvd at 15% O2. [40 CFR 60.4233(e) and Table 1]

B.9. Particulate Matter: The permittee shall minimize emissions of particulate matter by installing, operating and maintaining the required landfill gas treatment system as well as maintaining the air-to-fuel ratio to ensure efficient combustion. In addition, as determined by EPA Method 9, visible emissions from each engine/generator set shall not exceed 10% opacity, based on a six-minute average. *{Permitting Note: Based on these work practice standards, the maximum emissions of PM/PM_{10}/$PM_{2.5}$ from each engine/generator are estimated to be 0.24 g/bhp-hour, 1.2 lb/hour and 5.2 tons/year}.* [Rule 62-212.400(BACT), F.A.C.; and, Permit No. 1150089-008-AC/PSD-FL-422]

B.10. Volatile Organic Compounds. The emissions of VOC from each engine/generator set shall not exceed:

a. 0.42 g/bhp-hour and 2.08 lb/hour. [Rules 62-204.800 & 62-212.400(12)(AVOID PSD), F.A.C.; and NSPS Subparts A & JJJJ in 40 CFR 60]
b. 1.0 g/HP-hr or 80 ppmvd at 15% O_2. [40 CFR 60.4233(e) and Table 1]

B.11. Non-Methane Organic Compounds. The emissions of NMOC from each engine/generator set shall not exceed 0.52 g/bhp-hour and 2.57 lb/hour. [Rule 62-212.400(12) (AVOID PSD), F.A.C.; and, Permit No. 1150089-008-AC/PSD-FL-422]

B.12. VOC/NMOC Emission Caps. The emissions of VOC/NMOC from all engines combined shall not exceed 36.4 tons per consecutive 12 months for VOC and 45 tons per consecutive 12 months for NMOC. Compliance with each of these VOC/NMOC emissions caps shall be demonstrated on a 12-month rolling basis using the following equation:

(EF_{engine})(lb/454)(ton/2000 lb)(Engine 1+ Engine 2 + Engine 3) $\leq$ 36.0 TPY, VOC/45 TPY, NMOC

Where:

EF_{engine} = VOC/NMOC emission rate from most recent annual stack test, g/bhp-hour
$Engine_{bhp\text{-}hours}$.=.Rolling 12-month total of operating bhp-hours for each engine
If necessary, the permittee shall adjust engine operation to comply with the VOC/NMOC emissions caps. [Rule 62-212.400(12) (AVOID PSD), F.A.C.; and, Permit No. 1150089-008-AC/PSD-FL-422.]
{Permitting Note: Permit No. 1150089-008-AC included a fourth engine in the cap. The fourth engine was never installed.}

B.13. Sulfur Dioxide. The emissions of SO_2 from each engine/generator set shall not exceed 48 pounds/million standard cubic feet (lb/MMscf). [Rule 62-212.400(12) (AVOID PSD), F.A.C.; and, Permit No. 1150089-008-AC/PSD-FL-422]

B.14. Sulfur Dioxide Emission Cap. The emissions of SO_2 from all engines shall not exceed 36 tons per consecutive 12 months. Compliance with the SO_2 emissions cap shall be demonstrated on a 12-month rolling basis using the following information: the sulfur level in the scrubbed landfill gas fired; the amount of landfill gas fired in each combustion source; and the assumption that all sulfur is converted to SO_2. [Rule 62-212.400(12) (AVOID PSD), F.A.C.; and, Permit No. 1150089-008-AC/PSD-FL-422]
{Permitting Note: Permit No. 1150089-008-AC included a fourth engine in the cap. The fourth engine was never installed.}

B.15. Visible Emissions. Visible emissions from each engine/generator set exhaust shall not exceed 10% opacity. [Rule 62-212.400(BACT), F.A.C.; and, Permit No. 1150089-008-AC/PSD-FL-422]

Monitoring of Operations

B.16. Non-Resettable Elapsed Time Meter. Each engine shall be equipped with a non-resettable elapsed time meter to indicate the elapsed engine operating time in cumulative hours. [Permit No. 1150089-008-AC/PSD-FL-422]

B.17. Gas Flow Meter. A separate gas flow meter shall be operated per fuel type, to monitor the total volumetric flow rate. [40 CFR 63.6625(c); and Permit No. 1150089-008-AC/PSD-FL-422]

B.18. Landfill Gas Sampling/Analysis. At least semiannually, the permittee shall obtain the following representative samples of landfill gas: a sample taken during each required compliance stack test; and a sample taken during the next semiannual period. A representative sample shall be taken in each calendar semiannual period (January – June and July – December) approximately six months apart. Each gas sample shall be collected under normal operating conditions (i.e., with valves open for all operating cells) by appropriate canister (e.g. SUMMA®, Bottle-Vac Sampler or equivalent). Each sample shall have an analysis conducted to determine the sulfur content. Based on the sampling results and Rule 62-297.310(8)(c)(Special Compliance Tests), F.A.C., the Compliance Authority may request additional gas sampling and analyses. [Rule 62-212.400(12)(AVOID PSD), F.A.C.; and Permit No. 1150089-008-AC/PSD-FL-422]

Test Methods and Procedures

B.19. Landfill Gas Composition Analysis: The ASTM Method D5504-01, or equivalent, shall be used to satisfy the sampling/analysis of landfill gas. The landfill gas shall be collected and transported in an appropriate canister (e.g. SUMMA®, Bottle-Vac Sampler or equivalent). [Permit No. 1150089-008-AC/PSD-FL-422]

B.20. Test Requirements. During each required compliance stack test, the permittee shall operate a tested landfill gas engine at permitted capacity (90% to 100% of 2,242 bhp). The permittee shall notify the Compliance Authority in writing at least 15 days prior to any scheduled stack tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix TR (Facility-wide Testing Requirements) of this permit. [Rule 62-297.310(9), F.A.C.]

B.21. 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
7 or 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.)
18	Measurement of Gaseous organic Compound Emissions by Gas Chromatography {Note: The emission standards are based on VOC measured as methane.}
25A	Method for Determining Gaseous Organic Concentrations (Flame Ionization)
25C	Method for Determining Non-Methane Organic Compounds in Landfill Gases
TECO-55I	ALT-096 Direct Total Non-methane Hydrocarbon Analyzer

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. [Rule 62-204.800 F.A.C.; Appendix A of 40 CFR 60; and Permit No. 1150089-008-AC/PSD-FL-422]

B.22. Periodic Compliance Tests. Every 8,760 engine hours or at least once every three years, whichever comes first, each landfill gas engine shall be tested to demonstrate compliance with the emissions standards for CO, NO_X and VOC under 40 CFR 60, Subpart JJJJ as well as the BACT standards of Permit No. 1150089-008-AC. During these periodic tests, at least one landfill gas engine shall also be tested for opacity in accordance with EPA Method 9 and NMOC in accordance with EPA Method 25C, or Method 25A and 18, or alternative test method ALT-096 (TECO-55I). [Rules 62-212.400(BACT), F.A.C.; 40 CFR 60.4243(a)(2)(iii); and Permit No. 1150089-008-AC/PSD-FL-422]

B.23. Compliance with NSPS, Subpart JJJJ. Because these engines are not certified by the manufacturer to meet the emissions limitations contained in Specific Conditions B.7.b., B.8.b. and B.9.b., you must demonstrate compliance by performing the tests specified in **Specific Condition B.22.** according to the testing requirements contained in **Specific Condition B.24.** In addition, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 60.4243(b)(2)(ii)]

B.24. NSPS, Subpart JJJJ Test Methods. When demonstrating compliance with the emissions limitations contained in Specific Conditions B.7.b., B.8.b. and B.9.b., you must follow the procedures in paragraphs a. through f.

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 40 CFR 60, Subpart JJJJ. Link to 40 CFR 60, Subpart JJJJ, Table 2
b. You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in 40 CFR 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:

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

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:

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

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:

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

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.

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. The corrected VOC concentration can then be placed on a propane basis using Equation 6.

$$RF_i = \frac{C_{m}}{C_{Ai}} \qquad \text{(Eq. 4)}$$

Where:

RF_i = Response factor of compound i when measured with EPA Method 25A.
$C_{M\ i}$ = Measured concentration of compound i in ppmv as carbon.
$C_{A\ i}$ = True concentration of compound i in ppmv as carbon.

$$C_{i\,corr} = RF_i \times C_{i\,meas} \qquad \text{(Eq. 5)}$$

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.

$$C_{Peq} = 0.6098 \times C_{i\,corr} \qquad \text{(Eq. 6)}$$

Where:

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

[40 CFR 60.4244]

B.25. 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

B.26. Gas Flow Meter Daily Records. Daily records shall be used to monitor and record the fuel usage for all engines combined with a separate fuel meter to measure the volumetric flow rate of the landfill gas. [40 CFR 63.6625(c); and, Permit No. 1150089-008-AC/PSD-FL-422]

B.27. Monthly Records. Within ten calendar days following each month, the permittee shall observe and record the following information in a written log or electronic format accessible to a compliance inspector: number of hours of operation of each engine; total monthly landfill gas flow rate to all engines combined; and SO_2 emissions for the month and previous 12 months, rolling total. Emissions of SO_2 shall be calculated from the monthly fuel consumption as well as the analytical results for the sulfur contents of the landfill gas representative of the given month of operation based on the semiannual sampling for that period. [Rule 62-210.200 (232), F.A.C.; and, Permit No. 1150089-008-AC/PSD-FL-422]

B.28. NSPS, Subpart JJJJ Records. You must keep the following records:

a. All notifications submitted to comply with 40 CFR 60, Subpart JJJJ and all documentation supporting any notification.
b. Maintenance conducted on the engines.
c. Documentation that the engine meets the emission standards.

[40 CFR 60.4245(a)]

B.29. 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 test, shall provide the applicable information identified in Rule 62-297.310(10)(c). [Rule 62-297.310(10), F.A.C. ; and, Permit No. 1150089-008-AC/PSD-FL-422]

B.30. Gas Flow Meter Report. An annual report shall be submitted including the following data:

a. Fuel flow rate of the landfill gas and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas is equivalent to 10% or more of the total fuel consumption on an annual basis.
b. The operating limits provided in your federally enforceable permit, and any deviations from these limits.
c. Any problems or errors suspected with the meters.

[Permit No. 1150089-008-AC/PSD-FL-422]

B.31. Annual Reports. As part of the Annual Operating Report required in Facility-wide **Condition FW6.** the following data shall be reported:

a. Fuel flow rate of each fuel and the heating values that were used in your calculations. The permittee shall also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.
b. The operating limits provided in the permittee's federally enforceable permit, and any deviations from these limits.
c. Any problems or errors suspected with the meters.

[40 CFR 63.6650(g) and Table 7.2.]

General provisions

B.32. 40 CFR 60, Subpart A - General Provisions. The owner or operator shall comply with the applicable requirements of 40 CFR 60, Subpart A - General Provisions, as specified below.
Link to Subpart A and Link to Subpart JJJJ

General Provisions Citation	Subject of Citation	Explanation
§ 60.1	General applicability of the General Provisions	
§ 60.2	Definitions	Additional terms defined in § 60.4248.
§ 60.3	Units and abbreviations	
§ 60.4	Address	
§ 60.5	Determination of construction or modification	
§ 60.6	Review of plans	
§ 60.7	Notification and Recordkeeping	Except that § 60.7 only applies as specified in § 60.4245.
§ 60.8	Performance tests	Except that § 60.8 only applies to owners and operators who are subject to performance testing in subpart JJJJ.
§ 60.9	Availability of information	
§ 60.10	State Authority	
§ 60.11	Compliance with standards and maintenance requirements	Requirements are specified in subpart JJJJ.
§ 60.12	Circumvention	
§ 60.14	Modification	
§ 60.15	Reconstruction	
§ 60.16	Priority list	
§ 60.17	Incorporations by reference	
§ 60.19	General notification and reporting requirements	

[40 CFR 60.4246 and Table 3]

Table of Contents

Subsection C. The specific conditions in this section apply to the following emissions units:

EU No.	Brief Description
014	126 HP (94kW) Stationary Compression Ignition NSPS Emergency Generator
015	201 HP (150 kW) Stationary Compression Ignition NSPS Emergency Generator

EU 014, 126 HP stationary compression ignition emergency generator provides emergency backup power service to the administration/scale house buildings at the Central County Solid Waste Disposal Complex. EU 015, 201 HP stationary compression ignition emergency generator provides emergency backup power service to the landfill gas to energy facility. EUs 014 and 015 are not part of a demand response program and are not to be used for peak shaving or planned for non-emergency operation, except that non-emergency and non-maintenance operation will not exceed 50 hours per year for each engine. The engines do not have continuous emissions monitoring system (CEMS) or continuous parameter monitoring system (CPMS) for any pollutant.

The following table provides important information about the engines:

Engine Brake HP (kW)	Date of Order /Manufactured	Model Year	Displacement liters/cylinder (l/c)	Engine Manufacturer	Model No./ Serial No.
126 HP (94 kW)	September 5, 2013 November 5, 2013	2013	1.125	John Deere	4045HF285 PE4045L24796.
201 HP (150 kW)	July 17, 2014	2014	6.6	Caterpillar	D150-8

{Permitting Notes: These emergency compression ignition reciprocating internal combustion engines (CI RICE) are regulated under 40 CFR 63, Subpart ZZZZ, NESHAP for Stationary RICE and 40 CFR 60, Subpart IIII, NSPS for Stationary Compression Ignition RICE, adopted in Rules 62.204.800(11)(b) & (8)(b), F.A.C., respectively. This permit section addresses "new" stationary emergency CI RICE with displacements of less than 10 liters per cylinder, located at a major source of HAP, that have been modified, reconstructed or commenced construction on or after 6/12/2006, and that have a post-2007 model year. In accordance with provisions of 40 CFR 63.6590(c)(6), meeting the requirements of 40 CFR 60, Subpart IIII, satisfies compliance with the requirements of Subpart ZZZZ.}

Essential Potential to Emit (PTE) Parameters

C.1. Authorized Fuel. These Stationary Reciprocating Internal Combustion Engines (RICE) must use diesel fuel that meets the following requirements for non-road diesel fuel:

a. *Sulfur Content*. The sulfur content shall not exceed = 15 ppm = 0.0015% by weight (ultra low sulfur).

b. *Cetane and Aromatic*. The fuel must have a minimum cetane index of 40 or must have a maximum aromatic content of 35 volume percent.

[40 CFR 60.4207(b) and 40 CFR 80.510(b)]

C.2. Restricted Hours of Operation. The following limitations apply individually to each engine:

a. *Emergency Situations*. There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 60.4211(f)(1)]

b. *Other Situations*. The permittee may operate these emergency stationary RICE for any combination of the purposes specified in paragraphs **C.2.b.(1)** through **(3)** for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph **C.2c**. counts as part of the 100 hours per calendar year allowed by this paragraph.

(1) Maintenance and Testing. Each engine is authorized to operate 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. [40 CFR 60.4211(f)(2)(i)]

(2) Emergency Demand Response. Each engine may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see 40 CFR 63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3. [40 CFR 60.4211(f)(2)(ii)]

(3) Voltage or Frequency Deviations. Each engine may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. [40 CFR 60.4211(f)(2)(iii)]

c. *Non-emergency Situations*. These engines may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph b., above. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, 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. [40 CFR 60.4211(f)(3)]

Emissions Standards

C.3. NMHC + NO_X Emissions. Emissions of non-methane hydrocarbons (NMHC) plus nitrogen oxide NO_X shall not exceed:

a. *EU 014*: 4.0 grams per kilowatt hour (g/kW-hr), (Tier 3).
b. *EU 015*: 4.0 g/kW-hr, (Tier 3).

[40 CFR 60.4205(b), 40 CFR 60.4202(a)(2) and 40 CFR 89.112(a)]

C.4. CO Emissions. Carbon monoxide (CO) emissions shall not exceed:

a. *EU 014*: 5.0 g/kW-hr, (Tier 3).
b. *EU 015*: 3.5 g/kW-hr, (Tier 3).

[40 CFR 60.4205(b), 40 CFR 60.4202(a)(2) and 40 CFR 89.112(a)]

C.5. PM Emissions. Particulate matter (PM) emissions shall not exceed:

a. *EU 014*: 0.30 g/kW-hr, (Tier 3).
b. *EU 015*: 0.20 g/kW-hr, (Tier 3).

[40 CFR 60.4205(b), 40 CFR 60.4202(a)(2) and 40 CFR 89.112(a)]

Monitoring Requirements

C.6. Hour Meter. The owner or operator must install a non-resettable hour meter on each engine if one is not already installed. [40 CFR 60.4209(a)]

Testing and Compliance Requirements

C.7. Operation and Maintenance. The owner or operator must operate and maintain these engines according to the manufacturer's written instructions. In addition, owners and operators may only change those settings that are permitted by the manufacturer. This RICE must be maintained and operated to meet the emissions limits in **Specific Conditions C.3.-C.5.** over the entire life of the engine. [40 CFR 60.4206 & 4211(a)]

C.8. Engine Certification Requirements. The owner or operator must comply with the emissions standards specified above by having purchased an engine certified by the manufacturer to meet those limits. The engine must have been installed and configured according to the manufacturer's emission-related specifications, except as permitted in **Specific Condition C.9.** [40 CFR 60.4211(c)]

C.9. Compliance Requirements Due to Loss of Certification. If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. [40 CFR 60.4211(c) & (g)(2)]

C.10. Testing Requirements. In the event performance tests are required pursuant to **Specific Condition C.9.**, the following requirements shall be met:

a. *Testing Procedures*. The performance test must be conducted according to the in-use testing procedures in 40 CFR Part 1039, Subpart F. Link to Subpart F

b. *NTE Standards*. Exhaust emissions from these engines must not exceed the not-to-exceed (NTE) numerical requirements, rounded to the same number of decimal places as the applicable standard (STD) in **Specific Conditions C.3.-C.5.**, determined from the following equation:

NTE Requirement For Each Pollutant = (1.25) x (STD) (Eq. 1)

[40 CFR 60.4212(a) & (c)]

C.11. 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

C.12. Testing Notification. At such time that the requirements of Specific Condition **C.10.** become applicable, the owner or operator shall notify the compliance authority of the date by which the initial compliance test must be performed. [Rule 62-213.440(1), F.A.C.]

C.13. Hours of Operation Records. The owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner or operator must record the time of operation of the engine and the reason the engine was in operation during that time. [40 CFR 60.4214(b)]

C.14. Compliance Records. To demonstrate conformance with the manufacturer's written instructions for maintaining the certified engine and to document when compliance testing must be performed pursuant to **Specific Conditions C.9 & C.10.**, the owner or operator must keep the following records:

a. A copy of the manufacturer's certification.
b. A copy of the manufacturer's written instructions for operation and maintenance of the certified engine.
c. A written maintenance log detailing the date and type of maintenance performed on the engine, as well as any deviations from the manufacturer's written instructions.

[Rule 62-4.070(3), F.A.C.; and, 40 CFR 60.4211(a) & (c)]

C.15. Annual Report of Allowed Non-Emergency Operation. If you operate this engine for the purposes allowed in **Specific Condition C.2.b(2) or (3)**, you must submit an annual report according to the following requirements:

a. The report must contain the following information:

(1) Company name and address where the engine is located.
(2) Date of the report and beginning and ending dates of the reporting period.
(3) Engine site rating and model year.
(4) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
(5) Hours operated for the purposes specified in **Specific Condition C.2.b(2) or (3),** including the date, start time, and end time for engine operation for the purposes specified.

b. The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

c. The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (http://www.epa.gov/cdx/). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR 60.4. Link to 40 CFR 60.4

[40 CFR 60.4214(d)]

C.16. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

General Provisions

C.17. 40 CFR 60 Subpart A, General Provisions. The owner or operator shall comply with the applicable requirements of 40 CFR 60 Subpart A, General Provisions, as specified below. Link to 40 CFR 60, Subpart A - General Provisions.

General Provisions Citation	Subject of Citation
§ 60.1	General applicability of the General Provisions
§ 60.2	Definitions (see also § 60.4219)
§ 60.3	Units and abbreviations
§ 60.4	Address
§ 60.5	Determination of construction or modification
§ 60.6	Review of plans
§ 60.9	Availability of information
§ 60.10	State Authority
§ 60.12	Circumvention
§ 60.14	Modification
§ 60.15	Reconstruction
§ 60.16	Priority list
§ 60.17	Incorporations by reference
§ 60.19	General notification and reporting requirements

[40 CFR 60.4218]

Table of Contents