



Florida Department of Environmental Protection

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

NOTICE OF FINAL TITLE V AIR OPERATION PERMIT

In the Matter of an
Application for Permit:

Dr. Lee Niblock, County Administrator
Marion County Board of County Commissioners
601 SE 25th Avenue
Ocala, Florida 34471-2600

Final Permit No.: 0830124-010-AV
Marion County

Enclosed is the FINAL Permit, No. 0830124-010-AV. The purpose is for the renewal of the Title V Air Operation Permit No. 0830124-005-AV and revision of Title V Air Operation Permit 0830124-009-AV for the Marion County Baseline Landfill. This facility is located at 5601 SE 66th Street, Ocala, Florida. This permit renewal is issued pursuant to Chapter 403, Florida Statutes (F.S.). There were no comments received from Region 4, U.S. EPA, regarding the PROPOSED Permit.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; 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 of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Orange County, Florida.

Caroline D. Shine
District Air Program Administrator

CDS/jr/ta

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL TITLE V AIR OPERATION PERMIT (including the FINAL Determination and the FINAL Permit) was sent electronically before the close of business on June 7, 2011 to the person(s) listed:

Dr. Lee Niblock, County Administrator: lee.niblock@marioncountyfl.org

Mr. Lawrence Thacker, Jr., PhD, Assistant County Administrator, Public Works:

larry.thacker@marioncountyfl.org

Mr. Mike Sims, Assistant Solid Waste Director, Administration: mike.sims@marioncountyfl.org

Mr. Mark Hadlock, P.E., Senior Engineer, Jones Edmunds & Associates, Inc.:

mhadlock@jonesedmunds.com

Ms. Mickey Pollman, Jones Edmunds & Associates, Inc.: mpollman@jonesedmunds.com

Ms. Rebecca Kelner, P.E., Kelner Engineering, Inc.: rebecca@kelnerinc.com

Ms. Ana Oquendo, EPA Region 4: oquendo.ana@epamail.epa.gov

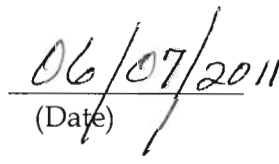
Ms. Barbara Friday, DEP BAR: barbara.friday@dep.state.fl.us (for posting with U.S. EPA, Region 4)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,

on this date, pursuant to §120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.


(Clerk)


(Date)

FINAL DETERMINATION

Title V Air Operation Permit Renewal and Revision
FINAL Permit No.: 0830124-010-AV
Marion County Board of County Commissioners
Marion County Baseline Landfill
Page 1 of 1

I. Comment(s).

No comments were received from the USEPA during their 45-day review period of the PROPOSED Permit.

II. Conclusion.

In conclusion, the permitting authority hereby issues the FINAL Permit.

STATEMENT OF BASIS

Title V Air Operation Permit Renewal and Revision Permit No. 0830124-010-AV

APPLICANT

The applicant for this project is Marion County Board of County Commissioners. The applicant's responsible official and mailing address are:

Dr. Lee Niblock, County Administrator
Marion County Board of County Commissioners
601 SE 25th Avenue
Ocala, Florida 34471-2600

FACILITY DESCRIPTION

The applicant operates the Marion County Baseline Landfill, which is located at 5601 SE 66th Street in Ocala, Florida.

This facility is a municipal solid waste disposal facility (landfill) with an active gas collection system. The collection system terminates in a candlestick flare destruction device or reciprocating internal combustion engine/generator sets No. 1, No. 2, and No. 3. Four backup generators are located at the facility.

EU 001 is subject to the following: 40 CFR Part 60, Subparts A (General Provisions) and WWW (Standards of Performance for Municipal Solid Waste Landfills); 40 CFR Part 63, Subparts A (General Provisions) and AAAA (National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills); with the exception of the candlestick flare control system, which shall have no visible emissions per 40 CFR Part 60.18(c)(1), The facility is subject to the General Visible Emissions (VE) limit of less than 20 percent per Rule 62-296.320(4)(b)1., F.A.C., VE testing of the candlestick flare is required annually; the General Volatile Organic Compound (VOC) standard per Rule 62-296.320(1)(a), F.A.C.; and the Objectionable Odor Rule per Rule 62-296.320(2), F.A.C.

EU 003, EU 004, and EU 005 (Reciprocating Internal Combustion Engine/Generator Sets) are subject to 40 CFR 60, Subpart JJJJ. EU 006 (Backup Generators) is subject to 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ.

PROJECT DESCRIPTION

The purpose of this permitting project is to renew and revise the existing Title V permit(s) for the above referenced facility.

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Application for a Title V Air Operation Permit Renewal received June 4, 2010
First Additional Information Request dated August 2, 2010
Renewed Title V Air Operation Permit issued August 3, 2010
Additional Information Response received October 31, 2010
Application for a Title V Air Operation Permit Revision received November 24, 2010

STATEMENT OF BASIS

PRIMARY REGULATORY REQUIREMENTS

Title III: The facility is not identified as a major source of hazardous air pollutants (HAP).

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is not a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility does operate units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.

NESHAP: The facility does operate units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

CAIR: The facility is not subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

CAM: Compliance Assurance Monitoring (CAM) does not apply to any of the units at the facility.

PROJECT REVIEW

This project incorporates the terms and conditions of Construction Permit 0830124-008-AC into the Title V air operation permit. Additionally, it is a renewal of Permit 0830124-005-AV and the permit has been reformatted.

CONCLUSION

This project renews Title V air operation permit No. 0830124-005-AV, which was issued on November 19, 2006 and revises Title V air operation permit No. 0830124-009-AV, which was issued on August 3, 2010. This Title V air operation permit renewal and revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C.

Marion County Board of County
Commissioners
Marion County Baseline Landfill
Facility ID No. 0830124
Marion County

Title V Air Operation Permit Renewal and Revision

Permit No. 0830124-010-AV

(Renewal of Title V Air Operation Permit No. 0830124-005-AV and Revision of Title V Air
Operation Permit No. 0830124-009-AV)



Permitting Authority:

State of Florida
Department of Environmental Protection
Air Resource Management, Central District
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803-3767
Telephone: (407) 893-3333
Fax: (850) 412-0455

Compliance Authority:

State of Florida
Department of Environmental Protection
Air Resource Management, Central District
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803-3767
Telephone: (407) 893-3333
Fax: (850) 412-0455

Title V Air Operation Permit Renewal and Revision

Permit No. 0830124-010-AV

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FINAL PERMIT

PERMITTEE:

Marion County Board of County Commissioners
601 SE 25th Avenue
Ocala, Florida 34471-2600

Permit No. 0830124-010-AV

Marion County Baseline Landfill

Facility ID No. 0830124

Title V Air Operation Permit Renewal and Revision

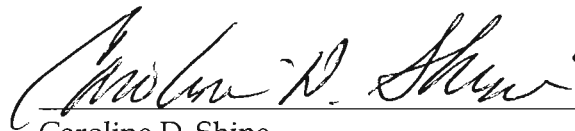
The purpose of this permit is to renew and to revise the Title V air operation permit for the above referenced facility. The existing Marion County Baseline Landfill is located in Marion County at 5601 SE 66th Street, Ocala, Florida. UTM Coordinates are: Zone 17, 397.7 East and 3222.1 North. Latitude is: 29° 07' 30" North; and, Longitude is: 82° 03' 45" West.

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

Effective Date: May 31, 2011

Renewal Application Due Date: October 19, 2015

Expiration Date: May 31, 2016



Caroline D. Shine

District Air Program Administrator

Central District

CDS/jr

SECTION I. FACILITY INFORMATION.

Subsection A. Facility Description.

This facility is a municipal solid waste disposal facility (landfill) with an active gas collection system. The collection system terminates in a candlestick flare destruction device or reciprocating internal combustion engine/generator sets No. 1, No. 2, and No. 3. Four backup generators are located at the facility.

Subsection B. Summary of Emissions Units.

EU No.	Brief Description
<i>Regulated Emissions Units</i>	
001	Municipal Solid Waste Landfill with a Candlestick Flare
003	Reciprocating Internal Combustion Engine/Generator Set No. 1
004	Reciprocating Internal Combustion Engine/Generator Set No. 2
005	Reciprocating Internal Combustion Engine/Generator Set No. 3
006	4 Backup Generators

Subsection C. Applicable Regulations.

Based on the Title V air operation permit renewal application received June 3, 2010 and revision application received November 24, 2010, this facility is **not** a major source of hazardous air pollutants (HAP).

A summary of applicable regulations is shown in the following table.

Regulation	EU Nos.
40 CFR 60, Subpart A, NSPS General Provisions	001
40 CFR 60, Subpart WWW, NSPS Municipal Solid Waste Landfills	001
40 CFR 63, Subpart A, NESHAP General Provisions	001
40 CFR 63, Subpart AAAA, NESHAP Municipal Solid Waste Facilities	001
40 CFR 60, Subpart JJJJ, NSPS for Stationary Spark Ignition Internal Combustion Engine	003, 004, 005
40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	006
40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants: Stationary Reciprocating Internal Combustion Engines {Permitting Note: Even though the facility is not considered a major source of HAPs, it still meets the definition of an <u>area</u> source of HAPs.}	006

SECTION II. FACILITY-WIDE CONDITIONS.

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

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

Emissions and Controls

FW2. Objectionable Odor Prohibited. No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.

[Rule 62-296.320(2) and 62-210.200(Definitions), F.A.C.]

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

[Rule 62-296.320(1), F.A.C.]

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

[Rule 62-296.320(4)(b)1, F.A.C.]

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

- a. Application of asphalt, water, chemicals, or other dust suppressants to unpaved roads, yards, open stock piles, and similar activities;
- b. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne;
- c. Landscaping or planting of vegetation; and
- d. Other techniques, as necessary.

[Rule 62-296.320(4)(c), F.A.C.]

Annual Reports and Fees

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

SECTION II. FACILITY-WIDE CONDITIONS.

- FW6. Annual Operating Report.** The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by April 1st of each year.
[Rule 62-210.370(3), F.A.C.]
- FW7. Annual Emissions Fee Form and Fee.** The annual Title V emissions fees are due (postmarked) by March 1st of each year. The completed form and calculated fee shall be submitted to: Major Air Pollution Source Annual Emissions Fee, P.O. Box 3070, Tallahassee, Florida 32315-3070. The forms are available for download by accessing the Title V Annual Emissions Fee On-line Information Center at the following Internet web site:
<http://www.dep.state.fl.us/air/emission/tvfee.htm>.
[Rule 62-213.205, F.A.C.]
- FW8. Annual Statement of Compliance.** The permittee shall submit an annual statement of compliance to the compliance authority at the address shown on the cover of this permit within 60 days after the end of each calendar year during which the Title V permit was effective.
[Rules 62-213.440(3)(a)2. & 3. and (3)(b), F.A.C.]
- FW9. 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 to:

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]
- FW10. Permit Renewal.** At least 225 days prior to the expiration date of this permit, the permittee shall submit to the Permitting Authority four copies of the air permit application, DEP Form No. 62-210.900(1). **(See Attached Appendix TV, Specific Condition TV18)**
[62-4.090, F.A.C.]
- FW11. Monitoring Reports.** The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports.
[Rule 62-213.440(1)(b)3.a., F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Emissions Unit 001

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

EU No.	Brief Description
001	Municipal Solid Waste Landfill with Candlestick Flare

Essential Potential to Emit (PTE) Parameters

- A.1. Permitted Capacity. The landfill gas collection system maximum flow rate is 2,500 scfm of gas.
[Rule 62-210.200(PTE), F.A.C.]
- A.2. Hours of Operation. This emissions unit may operate continuously (8,760 hours/year).
[Rule 62-210.200(PTE), F.A.C.]
- A.3. Emissions Unit Operating Rate Limitation After Testing. See the related testing provisions in Appendix TR, Facility-wide Testing Requirements.
[Rule 62-297.310(2), F.A.C.]

Emission Limitations and Standards

- A.4. Visible Emissions. The flare control system shall be designed for and operated with no visible emissions except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.
[40 CFR 60.18(c)(1)]

Monitoring of Operations

- A.5. Operational Monitoring. The flare control system shall be operated with a flame present at all times, as determined by a thermocouple or any other equivalent device to detect the presence of a flame. Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.
[40 CFR 60.18(b) through (f)]

Notification Requirements

- A.6. Test Notification. The permittee shall notify the Compliance Authority, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the permittee.
[Rules 62-4.070(3) and 62-297.310(7)(a)9., F.A.C.]

Test Methods and Procedures

- A.7. Test Methods. Required tests shall be performed in accordance with the following reference methods:

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Emissions Unit 001

EPA Method	Description of Method and Comments
22	Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares: Observation period is two (2) hours.

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

[40 CFR 60.8 and 62-297.400, F.A.C.]

A.8. 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.]

A.9. Annual Compliance Tests Required. During each federal fiscal year (October 1st to September 30th), EU 001 shall be tested to demonstrate compliance with the emissions standards for visible emissions specified in Specific Condition A.4.
[Rule 62-297.310(7), F.A.C.]

A.10. Specific Testing Requirements - Flare. All testing shall be conducted in accordance with the requirements in 40 CFR 60, Subpart A – General Provisions, § 60.18 General control device requirements. The requirements are listed below.

§ 60.18 General control device requirements.

(a) *Introduction.* This section contains requirements for control devices used to comply with applicable subparts of parts 60 and 61. The requirements are placed here for administrative convenience and only apply to facilities covered by subparts referring to this section.

(b) *Flares.* Paragraphs (c) through (f) apply to flares.

(c)(1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

(2) Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f).

(3) An owner/operator has the choice of adhering to either the heat content specifications in paragraph (c)(3)(ii) of this section and the maximum tip velocity specifications in paragraph (c)(4) of this section, or adhering to the requirements in paragraph (c)(3)(i) of this section.

(i)(A) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity, V_{max} , as determined by the following equation:

$$V_{max} = (XH_2 - K_1) * K_2$$

Where:

V_{max} = Maximum permitted velocity, m/sec.

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Emissions Unit 001

K1=Constant, 6.0 volume-percent hydrogen.

K2=Constant, 3.9(m/sec)/volume-percent hydrogen.

XH2=The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77. (Incorporated by reference as specified in § 60.17).

(B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (f)(4) of this section.

(ii) Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (f)(3) of this section.

(4)(i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4) of this section, less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (c)(4) (ii) and (iii) of this section.

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than the velocity, V_{max} , as determined by the method specified in paragraph (f)(5), and less than 122 m/sec (400 ft/sec) are allowed.

(5) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, V_{max} , as determined by the method specified in paragraph (f)(6).

(6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.

(d) Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.

(e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

(f)(1) Method 22 of appendix A to this part shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.

(2) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^n C_i H_i$$

Eq. 1

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Emissions Unit 001

where:

HT=Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$$K = \frac{\text{Constant}}{1.740 \times 10^{-7}} \left(\frac{1}{\text{ppm}} \right) \left(\frac{\text{g mole}}{\text{scm}} \right) \left(\frac{\text{MJ}}{\text{kcal}} \right)$$

where the standard temperature for $\left(\frac{\text{g mole}}{\text{scm}} \right)$ is 20°C;

Eq. 2

Ci=Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 or 90 (Reapproved 1994) (Incorporated by reference as specified in § 60.17); and

Hi=Net heat of combustion of sample component i, kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in § 60.17) if published values are not available or cannot be calculated.

(4) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

(5) The maximum permitted velocity, Vmax, for flares complying with paragraph (c)(4)(iii) shall be determined by the following equation. $\text{Log}_{10} (V_{\text{max}}) = (\text{HT} + 28.8) / 31.7$

Vmax=Maximum permitted velocity, M/sec

28.8=Constant

31.7=Constant

HT=The net heating value as determined in paragraph (f)(3).

(6) The maximum permitted velocity, Vmax, for air-assisted flares shall be determined by the following equation. $V_{\text{max}} = 8.706 + 0.7084 (\text{HT})$

Vmax=Maximum permitted velocity, m/sec

8.706=Constant

0.7084=Constant

HT=The net heating value as determined in paragraph (f)(3).

Recordkeeping and Reporting Requirements

A.11. The type of fuel and the heat input to this source must be entered on the visible emission test report.

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

A.12. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements.

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Emissions Unit 001

Other Requirements

- A.13. Federal Rule Requirements.** In addition to the specific conditions listed above, this emissions unit is also subject to the applicable requirements contained in 40 CFR 60, Subpart A – General Provisions and 40 CFR 60 Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills; 40 CFR 63, Subpart A – General Provisions and 40 CFR 63 Subpart AAAA – National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Facilities. The conditions are incorporated into this permit (attached and part of this permit).

{Permitting Note: The applicable general and specific requirements for both the NSPS and NESHAP referenced above, have been combined and attached as part of this permit.}

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

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Units 003, 004, and 005

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

EU No.	Brief Description
003	Reciprocating Internal Combustion Engine/Generator Set No. 1
004	Reciprocating Internal Combustion Engine/Generator Set No. 2
005	Reciprocating Internal Combustion Engine/Generator Set No. 3

Reciprocating Internal Combustion Engine/Generator Set No. 1 and No. 2 are manufactured by Caterpillar Model G3520C (2,333 hp and 1.6 MW each). The Reciprocating Internal Combustion Engine/Generator Set No. 3 is manufactured by Caterpillar and is Model G3516 (0.815 MW). The engines are fired by landfill gas only conveyed from the existing flare station through a treatment system that consists of compression, dehydrating, and filtering processes prior to being combusted in the engines. The existing flare will continue to operate to burn any excess landfill gas collected but not sent to the engines.

Essential Potential to Emit (PTE) Parameters

- B.1. Permitted Capacity.** Engine/Generator Set No. 1 and Engine/Generator Set No. 2 shall be fired with landfill gas only at a maximum of 1.6 MW of electrical power. Engine/Generator Set No. 3 shall be fired with landfill gas only at a maximum of 0.85 MW of electrical power.
[Rule 62-210.200(PTE), F.A.C.]
- B.2. Methods of Operation.** Unless otherwise indicated, the operation of the Caterpillar Reciprocating Internal Combustion Engine/Generator Sets shall be in accordance with the capacities and specifications stated in permit applications submitted to the Department.
[Rule 62-4.070, F.A.C.]
- B.3. Methods of Operation.** Fuel fired in the Engine/Generator Sets is limited to LFG (landfill gas). The use of any other fuel will require a modification or amendment to a previous construction permit or a new construction permit.
[Rule 62-4.070, F.A.C.]
- B.4. Hours of Operation.** There is no limitation on the annual hours of operation (8,760 hours/year).
[Rule 62-210.200(PTE), F.A.C.]
- B.5. Methods of Operation.** Excess landfill gas not used as fuel in an engine must be flared in accordance with the requirements of 40 CFR 60, Subpart WWW.
[Rule 62-4.070, F.A.C.]
- B.6. Emissions Unit Operating Rate Limitation After Testing.** See the related testing provisions in Appendix TR, Facility-wide Testing Requirements.
[Rule 62-297.310(2), F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Units 003, 004, and 005

Emission Limitations and Standards

- B.7. Visible Emissions. Visible emissions from each source must comply with Rule 62-296.320(4)(b)1., F.A.C., and are limited to less than 20 percent opacity.

Notification Requirements

- B.8. Test Notification: The permittee shall notify the Compliance Authority, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the permittee.
[Rules 62-4.070(3) and 62-297.310(7)(a)9., F.A.C.]

Test Methods and Procedures

- B.9. Test Methods. Required tests shall be performed in accordance with the following reference method:

DEP Method	Description of Method and Comments
9	Visual Determination of the Opacity of Emissions from Stationary.

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department.
[40 CFR 60.8 and 62-297.400, F.A.C.]

- B.10. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit.
[Rule 62-297.310, F.A.C.]
- B.11. Annual Compliance Tests Required. During each federal fiscal year (October 1st to September 30th), EU 002 shall be tested to demonstrate compliance with the emissions standards for visible emissions specified in Specific Condition B.5. The test period shall be 30 minutes.
[Rules 62-297.310(4)(a)2. And 62-297.310(7)(a)4.a., F.A.C.]

Recordkeeping and Reporting Requirements

- B.12. The type of fuel and the heat input to this source must be entered on the visible emission test report.
[Rule 62-4.070(3), F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Units 003, 004, and 005

- B.13. Other Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements.

Other Requirements

- B.14 Federal Rule Requirements.** In addition to the specific conditions listed above, the engines are subject to the applicable requirements contained in 40 CFR 60, Subpart JJJJ, NSPS for Stationary Spark Ignition Internal Combustion Engines. The conditions are incorporated into this permit (attached and part of this permit).
[Rule 62-213.440, F.A.C.]

Permitting Note: The following is from 40 CFR 60, Subpart JJJJ: e) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.

Table 1 to Subpart JJJJ of Part 60—NO_x, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards ^a					
			g/HP-hr			ppmvd at 15% O ₂		
			NO _x	CO	VOC ^d	NO _x	CO	VOC ^d
Non-Emergency SI Natural Gas ^b and Non-Emergency SI Lean Burn LPG ^b	100≤HP<500	7/1/2008	2.0	4.0	1.0	160	540	86
		1/1/2011	1.0	2.0	0.7	82	270	60
Non-Emergency SI Lean Burn Natural Gas and LPG	500≥HP<1,350	1/1/2008	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≥HP<1,350)	HP≥500	7/1/2007	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Landfill/Digester Gas (except lean burn 500≥HP<1,350)	HP<500	7/1/2008	3.0	5.0	1.0	220	610	80
		1/1/2011	2.0	5.0	1.0	150	610	80
	HP≥500	7/1/2007	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Landfill/Digester Gas Lean Burn	500≥HP<1,350	1/1/2008	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Emergency	25>HP<130 HP≥130	1/1/2009	≤10 2.0	387 4.0	N/A 1.0	N/A 160	N/A 540	N/A 86

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Units 003, 004, and 005

^aOwners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O₂.

^bOwners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake HP located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2A do not have to comply with the CO emission standards of Table 1 of this subpart.

^cThe emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO_x+HC.

^dFor purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

Table 2 to Subpart JJJJ of Part 60—Requirements for Performance Tests

[As stated in §60.4244, you must comply with the following requirements for performance tests within 10 percent of 100 percent peak (or the highest achievable) load]

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary SI internal combustion engine demonstrating compliance according to §60.4244.	a. limit the concentration of NO _x in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005) ^a .	(a) If using a control device, the sampling site must be located at the outlet of the control device.
	ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B ^b of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005) ^a .	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for NO _x concentration.	
	iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.		
	iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture must be made at the same time as the measurement for NO _x concentration.	

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Units 003, 004, and 005

	v. Measure NO _x at the exhaust of the stationary internal combustion engine.	(5) Method 7E of 40 CFR part 60, appendix A, Method D6522-00(2005) ^a , Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 (incorporated by reference, see §60.17).	(d) Results of this test consist of the average of the three 1-hour or longer runs.	
	b. limit the concentration of CO in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A.	(a) If using a control device, the sampling site must be located at the outlet of the control device.
	ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3Bb of 40 CFR part 60, appendix A or ASTM Method D6522-00(2005) ^a .	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for CO concentration.	
	iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.		
	iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture must be made at the same time as the measurement for CO concentration.	
	v. Measure CO at the exhaust of the stationary internal combustion engine.	(5) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00(2005) ^a , Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17).	(d) Results of this test consist of the average of the three 1-hour or longer runs.	
	c. limit the concentration of VOC in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A.	(a) If using a control device, the sampling site must be located at the outlet of the control device.
	ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B ^b of 40 CFR part 60, appendix A or ASTM Method D6522-00(2005) ^a .	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for VOC concentration.	
	iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.		

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Units 003, 004, and 005

	iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture must be made at the same time as the measurement for VOC concentration.	
	v. Measure VOC at the exhaust of the stationary internal combustion engine.	(5) Methods 25A and 18 of 40 CFR part 60, appendix A, Method 25A with the use of a methane cutter as described in 40 CFR 1065.265, Method 18 or 40 CFR part 60, appendix A, ^d Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 (incorporated by reference, see §60.17).	(d) Results of this test consist of the average of the three 1-hour or longer runs.	

^aASTM D6522-00 is incorporated by reference; see 40 CFR 60.17. Also, you may petition the Administrator for approval to use alternative methods for portable analyzer.

^bYou may use ASME PTC 19.10-1981, Flue and Exhaust Gas Analyses, for measuring the O₂ content of the exhaust gas as an alternative to EPA Method 3B.

^cYou may use EPA Method 18 of 40 CFR part 60, appendix A, provided that you conduct an adequate presurvey test prior to the emissions test, such as the one described in OTM 11 on EPA's Web site (<http://www.epa.gov/ttn/emc/prelim/otm11.pdf>).

^dYou may use ASTM D6420-99 (2004), Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography/Mass Spectrometry as an alternative to EPA Method 18 for measuring total nonmethane organic.

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection C. Emissions Unit 006

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

EU No.	Brief Description
006	4 Backup Generators: LFGGen - 3, LFGGen - 4, LFGGen - 5, LFGGen - 6

Essential Potential to Emit (PTE) Parameters

- C.1. Federal Rule Requirements. This emissions unit is subject to the applicable requirements contained in 40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines and 40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants: Stationary Reciprocating Internal Combustion Engines [Rule 62-213.440, F.A.C.]

{Permitting Note: Even though the facility is not considered a major source of HAPs, it still meets the definition of an area source of HAPs.}

Recordkeeping Requirements

- C.2. Recordkeeping. Maintain recordkeeping necessary to maintain compliance with 40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines and 40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants: Stationary Reciprocating Internal Combustion Engines. The conditions are incorporated into this permit (attached and part of this permit). [Rule 62-213.440, F.A.C.]

Permitting Note: Maintain a maintenance log for the engines based on the manufacturer's emission-related written instructions or your own maintenance plan. The following is from 40 CFR Subpart ZZZZ:

e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions.

SECTION IV. APPENDICES.

The Following Appendices Are Enforceable Parts of This Permit:

Appendix A, Glossary.
Appendix F – Alternate Operating Procedures
Appendix G – Alternating Operating Parameter Value for Specified Gas Extraction Wells
Appendix ICE – Requirements for Internal Combustion Engines
Appendix NSPS and NESHAP COMBINED, Subpart A – General Provisions
Appendix NSPS and NESHAP COMBINED, Subpart WWW and Subpart AAAA
Appendix IIII – 40 CFR 60, Subpart IIII
Appendix JJJJ – 40 CFR 60, Subpart JJJJ
Appendix ZZZZ – 40 CFR 63, Subpart ZZZZ
Appendix RR, Facility-wide Reporting Requirements.
Appendix TR, Facility-wide Testing Requirements.
Appendix TV, Title V General Conditions.

REFERENCED ATTACHMENTS.

The Following Attachments Are Included for Applicant Convenience:

Figure 1, Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance (40 CFR 60, July, 1996).

Table H, Permit History.

Table 1, Summary of Monitoring Requirements for MSW Landfills

Table 2, Summary of Recordkeeping Requirements for MSW Landfills

Table 3, Summary of Reporting Requirements for MSW Landfills