



Florida Department of Environmental Protection

Central District
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REVISED DRAFT PERMIT

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PERMITTEE

Volusia County Solid Waste Services Division
3151 New York Avenue
DeLand, Florida 32724

Authorized Representative:
Mr. Leonard Marion, Director

Air Permit No. 1270117-007-AC
Permit Expires: March 30, 2012
Site Name: Tomoka Farms Road
Landfill
Major Source Air Construction Permit
Project Name: Remove Condition and
Remove Enclosed Flare

This is the final air construction permit, which authorizes the removal (deletion) of previous condition A8 of the Title V Permit and removes the original enclosed flare from the Title V Permit (the original enclosed flare is being decommissioned). The description has been modified to reflect the connection of a backup generator electrical source from an existing generator to the open flare and installation of a regulated pressure valve. Recent actions that have taken place or will take place soon include connection of a backup electrical source from an existing generator to the open flare, installation of a regulated pressure valve to improve flare and system performance, and decommissioning of the original enclosed flare. The proposed work will be conducted at the Tomoka Farms Road Landfill, which is a municipal solid waste disposal facility (landfill) with an active gas collection system (Standard Industrial Classification No. 4953 and 4932). The facility is located in Volusia County at 1990 Tomoka Farms Road, Port Orange, Florida 32128. The UTM coordinates are Zone 17, 491.54 km East, and 3222.2 km North.

This final permit is organized by the following sections:

- Section 1. General Information.
- Section 2. Administrative Requirements.
- Section 3. Emissions Unit Specific Conditions.
- Section 4. Appendices.

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

This air pollution permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 63-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (REVISED DRAFT)

FACILITY AND PROJECT DESCRIPTION

Tomoka Farms Road Landfill

The facility is a municipal solid waste disposal facility (landfill) with an active gas collection system.

The existing facility consists of the following emissions units.

Facility ID No. 1270117	
ID No.	Emissions Unit Description
001	Municipal Solid Waste Landfill with one flare
002	Generator Set - 4 Caterpillar 3516 SITA engines

Project Description:

The purpose of this project is the removal (deletion) of previous condition A8 of the Title V Permit and removes the original enclosed flare from the Title V Permit (the original enclosed flare is being decommissioned). The description has been modified to reflect the connection of a backup generator electrical source from an existing generator to the open flare and installation of a regulated pressure valve. Recent actions that have taken place or will take place soon include connection of a backup electrical source from an existing generator to the open flare, installation of a regulated pressure valve to improve flare and system performance, and decommissioning of the original enclosed flare.

This project will delete a condition and the original enclosed flare associated with the following emission unit.

Facility ID No. 1270117	
ID No.	Emissions Unit Description
001	Municipal Solid Waste Landfill with one flare

NOTE: Please reference the Permit No., Facility ID, and Emission Unit ID in all correspondence, test report submittals, applications, etc.

FACILITY REGULATORY CLASSIFICATION

- The facility is **NOT** a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- 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.
- The facility is a major stationary source in accordance with Rule 62-212.400 (PSD), F.A.C.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (REVISED DRAFT)

- The Municipal Solid Waste Landfill with a utility flare (EU ID Nos. -001) are subject to 40 CFR 60, subpart A, 40 CFR 60, Subpart WWW, 40 CFR 63, Subpart A, and 40 CFR 63, subpart AAAA. The Generator Set - 4 Caterpillar 3516 SITA engines (EU ID Nos. -002) are subject to the provisions of 40 CFR Part 63, Subpart A - General Provisions and 40 CFR Part 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. Other engines listed in Appendix ICE are subject to 40 CFR Part 63, Subpart ZZZZ also.

1. Permitting Authority: The permitting authority for this project is the Florida Department of Environmental Protection, Central District Office. The Central District Office's mailing address and phone number is:

Florida Department of Environmental Protection
Central District Office
Air Resource Management Section
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803-3767
Telephone: 407-893-3333

All documents related to applications for permits to operate an emissions unit shall be submitted to the above address.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Central District Office's Air Resource Management Section (see above mailing address and phone number).
3. Appendices: The following Appendices are attached as part of this permit:
 - a. Appendix A. Citation Formats and Glossary of Common Terms;
 - b. Appendix B. General Conditions;
 - c. Appendix C. Common Conditions;
 - d. Appendix D. Common Testing Requirements;
 - e. Appendix E. NESHAP- 40 CFR 63, Subpart A, General Provisions; and
 - f. Appendix F. NESHAP- 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (REVISED DRAFT)

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Annual Operating Report: On or before **April 1** of each year, the permittee shall submit a completed DEP Form 62-210.900(5), "Annual Operating Report for Air Pollutant Emitting Facility" (AOR) for the preceding calendar year. The report may be submitted electronically in accordance with the instructions received with the AOR package sent by the Department, or a hardcopy may be sent to the Compliance Authority.
[Rule 62-210.370(3), F.A.C.]
8. Operation Permit Application: This permit authorizes construction or modification of the permitted emissions unit(s) and initial operation to determine compliance with Department rules. A Title V air operation permit is required for continued operation of the permitted emissions unit(s).

[Permitting Note: The application for the operation permit has already been submitted to the Department]

[Rules 62-4.030, 62-4.050, and 62-4.220, F.A.C.]

**SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (REVISED
DRAFT)**

A. Emission Unit 001

This section of the permit addresses the following emissions unit.

ID No.	Emissions Unit Description
001	Municipal Solid Waste Landfill with one flare

Essential Potential to Emit (PTE) Parameters

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

Emission Limitations and Standards

A.2. 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.3. 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.4. 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.5. Test Methods. Required tests shall be performed in accordance with the following reference methods:

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (REVISED DRAFT)

A. Emission 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.6. 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.]

{Permitting Note: Deleted Condition TR.2.}

A.7. 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 Number A.2.
[Rule 62-297.310(7), F.A.C.]

A.8. 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.

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (REVISED DRAFT)

A. Emission Unit 001

(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.

K_1 = Constant, 6.0 volume-percent hydrogen.

K_2 = Constant, 3.9(m/sec)/volume-percent hydrogen.

XH_2 = 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.

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (REVISED DRAFT)

A. Emission Unit 001

(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:

HT = k * sum from i=1 to n of CiHi Eq. 1

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 = Constant, 1.740 x 10^-7 (1/ppm) (g mole/scm) (MJ/kcal)

where the standard temperature for (g mole/scm) 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. Log10 (Vmax)=(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. Vmax=8.706+0.7084 (HT)

Vmax=Maximum permitted velocity, m/sec

8.706=Constant

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (REVISED
DRAFT)

A. Emission Unit 001

0.7084=Constant

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

Recordkeeping and Reporting Requirements

- A.9. 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.10. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements.

Other Requirements

- A.11. 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.]