Orange County Board of County Commissioners
Orange County Solid Waste Management Facility

Facility ID No. 0950113
Orange County

Title V Air Operation Permit Revision

Permit No. 0950113-008-AV
(Revision of Title V Air Operation Permit No. 0950113-006-AV)

Permitting Authority:

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Title V Air Operation Permit Revision

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Orlando, Florida 32829

Permit No. 0950113-008-AV
Orange County Solid Waste Management Facility
Facility ID No. 0950113
Title V Air Operation Permit Revision

The purpose of this permit is to revise the Title V air operation permit for the above referenced facility to include the new emission unit: Landfill Gas Collection System (Cell 2) with Candlestick Flare. The existing Orange County Solid Waste Management Facility is located at 5901 Young Pine Road, Orlando, in Orange County. UTM Coordinates are: Zone 17, 481.20 km East and 3150.30 km North. Latitude is: 28° 28' 52" North; and, Longitude is: 81° 11' 30" 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.

Effective Date: April 16, 2014
Renewal Application Due Date: August 18, 2015
Expiration Date: March 30, 2016

David L. Read, P.E.
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for: Jeffery F. Koerner, Program Administrator
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SECTION I. FACILITY INFORMATION.

Subsection A. Facility Description.

This facility is a municipal solid waste disposal facility (landfill) that has been in operation since 1974. The facility consists of closed and active Class I and Class III landfill cells. The design capacity of the landfill is greater than 2.5 million megagrams by mass or 2.5 million cubic meters by volume. It is an active asbestos waste disposal site. There is no bioreactor at the landfill. Non-methane organic compound (NMOC) emissions are calculated to be equal to or greater than 50 megagrams per year. Landfill gas emissions are collected and controlled by a flare. The facility also has five emergency generators used to provide power during outages.

Subsection B. Summary of Emissions Units.

EU No.	Brief Description
Regulated Emissions Units	
001	Municipal Solid Waste Landfill with Candlestick Flare
002	Landfill Gas Collection System (Cells 9-12) with Candlestick Flare
003	5 Emergency Generators: Gen-1, Gen-2, Gen-3, Gen-4, and Gen-5
004	Landfill Gas Collection System (Cell 2) with Candlestick Flare

Also included in this permit are miscellaneous insignificant emissions units and/or activities (see Appendix I, List of Insignificant Emissions Units and/or Activities).

Subsection C. Applicable Regulations.

Based on the Title V air operation permit renewal application received January 14, 2014, this facility is not a major source of hazardous air pollutants (HAP). A summary of applicable regulations is shown in the following table.

Regulation	EU No(s).
Federal Rule Citations	
40 CFR 60, Subpart A, NSPS General Provisions	001, 002, 003, 004
40 CFR 60, Subpart WWW, NSPS Municipal Solid Waste Landfills	001, 002, 004
40 CFR 63, Subpart A, NESHAP General Provisions	001, 002, 003, 004
40 CFR 63, Subpart AAAA, NESHAP Municipal Solid Waste Facilities	001, 002, 004
40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	003
40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants: Stationary Reciprocating Internal Combustion Engines	003
State Rule Citations	
Rule 62-4, Florida Administrative Code (F.A.C.) (Permitting Requirements)	001, 002, 003, 004
Rule 62-204, F.A.C. (Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference)	001, 002, 003, 004
Rule 62-210, F.A.C. (Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms)	001, 002, 003, 004

Rule 62-213, F.A.C. (Title V Air Operation Permits for Major Sources of Air Pollution)	001, 002, 003, 004
Rule 62-297, F.A.C. (Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures)	001, 002, 003, 004

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

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

Emissions and Controls

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

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

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

FW4. General Visible Emissions. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. 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. 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.
d. Other techniques, as necessary.

[Rule 62-296.320(4)(c), F.A.C.; and, proposed by applicant in Title V air operation permit renewal application received July 16, 2010.]

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 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 (b), F.A.C.]

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://www.epa.gov/osweroe1/content/rmp/index.htm. 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]

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

This emissions unit consists of an active, Class I municipal solid waste disposal facility (landfill) that has been in operation since 1974. The design capacity of the landfill is greater than 2.5 million megagrams by mass or 2.5 million cubic meters by volume. It is an active asbestos waste disposal site. There is no bioreactor at the landfill. Non-methane organic compound (NMOC) emissions are calculated to be equal to or greater than 50 megagrams per year. Landfill gas emissions are collected and controlled by a flare.

{Permitting note: This emission unit is regulated under NSPS 40 CFR 60, Subpart WWW, "Standards of Performance for Municipal Solid Waste Landfills", adopted and incorporated by reference in Rule 62-204.800(8)(b), F.A.C. This emission unit is also regulated under NESHAP 40 CFR 63, Subpart AAAA "National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills". This emission unit is also subject to the requirements of 40 CFR 61 National Emission Standard for Hazardous Air Pollutants (NESHAP) Subpart M (National Emission Standard for Asbestos), as adopted and incorporated by reference in Rule 62-204.800(10)(b) 8., F.A.C., as they apply to asbestos disposal}

Essential Potential to Emit (PTE) Parameters

A.1. 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.]

A.2. Hours of Operation. This emissions unit may operate continuously (8,760 hours/year). [Rule 62-210.200(PTE), F.A.C. and Permit No. 0950113-004-AV]

Emission Limitations and Standards

A.3. 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)(l)]

Monitoring of Operations

{Permitting Note: The attached Table 1, Summary of Monitoring Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

A.4. 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 40 CFR 60, Subpart A 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)]

Test Methods and Procedures

A.5. Test Methods. When required, tests shall be performed in accordance with the following reference methods:

Method	Description of Method and Comments
22	Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares: 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 Rule 62-297.401, 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.]

A.7. Annual Compliance Tests Required. During each federal fiscal year (October 1st to September 30th), each EU shall be tested to demonstrate compliance with the emissions standards for visible emissions specified in Specific Condition **A.3.** [Rule 62-297.310(7), F.A.C.]

Notification Requirements

A.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.]

Recordkeeping and Reporting Requirements

{Permitting Note: The attached Tables 2 and 3, Summary of Recordkeeping and Reporting Requirements, summarize information for convenience purposes only. These tables do not supersede any of the terms or conditions of this permit.}

A.9. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

Other Requirements

A.10. 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). [Rule 62-213.440, F.A.C.]

{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.}

Subsection B. Emissions Unit 002

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

EU No.	Brief Description
002	Landfill Gas Collection System (Cells 9-12) with Candlestick Flare

This emissions unit consists of the collection and control system for the Southern Expansion Site, active Class I municipal solid waste disposal Cells 9 – 12. The landfill gas is collected and controlled by a 4,000 scfm Candlestick Flare.

{Permitting Note: This emissions unit is regulated under 40 CFR 60, Subpart A, the General Control Device and Work Practice Requirements adopted in Rule 62.204.800(8)(b), F.A.C. and 40 CFR 60, Subpart WWW, "Standards of Performance for Municipal Solid Waste Landfills", adopted and incorporated by reference in Rule 62-204.800(8)(b), F.A.C.}

Essential Potential to Emit (PTE) Parameters

B.1. Permitted Capacity. The maximum average landfill gas flow rate to the candlestick flare shall not exceed 3,400 scfm. [Rule 62-210.200(PTE), F.A.C.; Permit No. 0950113-005-AC]

B.2. Methods of Operation. Landfill gas must be flared in accordance with the requirements of 40 CFR 60, Subpart WWW. [Rule 62-4.070, F.A.C.; Permit No. 0950113-005-AC]

B.3. Emissions Unit Operating Rate Limitation After Testing. See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

B.4. Hours of Operation. The candlestick flare may operate continuously (8,760 hours/year). [Rule 62-210.200(PTE), F.A.C., Permit No. 0950113-005-AC]

Emission Limitations and Standards

B.5. 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)(l)]

Monitoring of Operations

{Permitting Note: The attached Table 1, Summary of Monitoring Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

B.6. 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 40 CFR 60, Subpart A 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)]

Test Methods and Procedures

B.7. Test Methods. When required, tests shall be performed in accordance with the following reference methods:

Method	Description of Method and Comments
22	Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares: 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 Rule 62-297.401, F.A.C.]

B.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.]

B.9. Annual Compliance Tests Required. During each federal fiscal year (October 1st to September 30th), each EU shall be tested to demonstrate compliance with the emissions standards for visible emissions specified in Specific Condition **B.5.** [Rule 62-297.310(7), F.A.C.]

Notification Requirements

B.10. 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.]

Recordkeeping and Reporting Requirements

B.11. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

B.12. Specific Reporting Requirement. In order to demonstrate compliance with Specific Condition **B.1.** and pursuant to Rule 62-4.070(3), F.A.C., the permittee shall maintain a monthly log at the facility for a period of five (5) years from the date the data is recorded. The log shall contain the following:

a. Date (Month, Day, Year) of record; and
b. Hourly landfill gas flow rate to the candlestick flare. [Rule 62-4.070(3), F.A.C.]

Other Requirements

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

{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.}

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

EU No.	Brief Description
003	5 Emergency Generators: Gen-1, Gen-2, Gen-3, Gen-4, and Gen-5

The five emergency, diesel fired, engines provide backup power to the facility. Gen-1, Gen- 2, Gen-3, and Gen-5 are "existing" engines subject to the requirements of 40 CFR 63 Subpart ZZZZ. Gen-4 is a "new" engine and in addition to the requirements of 40 CFR 63 Subpart ZZZZ , is also subject to 40 CFR 60, Subpart IIII.)

{Permitting Note: These compression ignition (CI) engines are regulated under 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) adopted in Rule 62.204.800(11)(b), F.A.C.; and, 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines adopted in Rule 62.204.800(8)(b), F.A.C.}

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.}

{Permitting Note: Gen-4 is subject to 40 CFR 60, Subpart IIII; and Gen-1, Gen- 2, Gen-3, and Gen-5 are subject to 40 CFR 63 Subpart ZZZZ. For Gen-4, compliance is demonstrated through manufacturer's certification. For Gen-1 , Gen- 2, Gen-3, and Gen-5, the permittee shall change oil and filter every 500 hours of operation or annually, whichever comes first; inspect air cleaner every 1,000 hours of operation annually, whichever comes first; and inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. Additionally, for Gen-1, Gen-2, Gen-3, and Gen-5, to comply with the requirement of work or management practices, the permittee must demonstrate continuous compliance by operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or develop and follow the permittee's 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. Gen-4 is not subject to 40 CFR Subpart ZZZZ because it is considered new and is less than 500 HP. Gen-4 HP is 234.7 HP@ 1800 rpm}

Record keeping 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. To maintain compliance with the subparts mentioned in this condition, permittee shall keep, at a minimum, the following records:

a. All notifications submitted to comply with these subparts and all documentation supporting any notification.

b. Maintenance conducted on the engine and air pollution control and monitoring equipment.

c. Performance tests and performance evaluations as required in §63.10(b)(2)(viii).

d. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

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

f. If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

g. If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

The conditions are incorporated into this permit (attached and part of this permit). [40 CFR 60.4214, 40 CFR 63.6655, and Rule 62-213.440, F.A.C.]

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

EU No.	Brief Description
004	Landfill Gas Collection System (Cell 2) with Candlestick Flare

This emissions unit consists of the collection and control system for the active Class III municipal solid waste disposal Cells 9 – 12. The landfill gas is collected and controlled by a 1,400 scfm Candlestick Flare.

{Permitting Note: This emissions unit is regulated under 40 CFR 60, Subpart A, the General Control Device and Work Practice Requirements adopted in Rule 62.204.800(8)(b), F.A.C. and 40 CFR 60, Subpart WWW, "Standards of Performance for Municipal Solid Waste Landfills", adopted and incorporated by reference in Rule 62-204.800(8)(b), F.A.C.}

Essential Potential to Emit (PTE) Parameters

D.1. Hours of Operation. These emissions units may operate continuously (8,760 hours/year). [Rule 62-210.200(PTE), F.A.C. and 0950113-007-AC]

D.2. Flare Opacity Limit. See Specific Condition **D.5.**

D.3. Permitted Capacity. The maximum landfill gas flow rate to the candlestick flare shall not exceed 1,400 scfm. [0950113-007-AC]

General Control Device and Work Practice Requirements

D.4. Operational Standards. Operate the control or treatment system at all times when the collected gas is routed to the system. [40 CFR 60.753(f)]

D.5. General Control Device and Work Practice Requirements.

(1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in 40 CFR 60.18(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 40 CFR 60.18(f).

(3) An owner/operator has the choice of adhering to either the heat content specifications in 40 CFR 60.18(c)(3)(ii) and the maximum tip velocity specifications in 40 CFR 60.18(c)(4), or adhering to the requirements in 40 CFR 60.18(c)(3)(i).

(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:

$$V_{max}=(X_{H2}-K_1)* K_2$$

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.

X_{H2} = 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 40 CFR 60.17).

(B) The actual exit velocity of a flare shall be determined by the method specified in 40 CFR 60.18(f)(4).

(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 40 CFR 60.18(f)(3).

(4)

(i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18 (f)(4), less than 18.3 m/sec (60 ft/sec), except as provided in 40 CFR 60.18(c)(4) (ii) and (iii).

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(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 40 CFR 60.18(f)(4), less than the velocity, Vmax, as determined by the method specified in 40 CFR 60.18 (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, Vmax, as determined by the method specified in 40 CFR 60.18(f)(6).

(6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted. [40 CFR 60.18(c)]

D.6. General Control Device and Work Practice Requirements. Owners or operators of flares used to comply with the provisions of 40 CFR 60 shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts of 40 CFR 60 will provide provisions stating how owners or operators of flares shall monitor these control devices. . [40 CFR 60.18(d)]

D.7. General Control Device and Work Practice Requirements. Flares used to comply with provisions of 40 CFR 60 shall be operated at all times when emissions may be vented to them. [40 CFR 60.18(e)]

D.8. General Control Device and Work Practice Requirements.

(1) Method 22 of appendix A to 40 CFR 60 shall be used to determine the compliance of flares with the visible emission provisions of 40 CFR 60. 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:

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

where:

H_T = 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;

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

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

C_i = 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 40 CFR 60.17); and

H_i = 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 40 CFR 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 40 CFR 60.18 (c)(4)(iii) shall be determined by the following equation.

$$\text{Log}_{10}(V_{max})=(H_T+28.8)/31.7$$

V_{max} = Maximum permitted velocity, M/sec
28.8 = Constant
31.7 = Constant
H_T = The net heating value as determined in 40 CFR 60.18 (f)(3).

(6) The maximum permitted velocity, Vmax, for air-assisted flares shall be determined by the following equation.

$$V_{max}=8.706+0.7084\ (H_T)$$

V_{max} = Maximum permitted velocity, m/sec
8.706 = Constant
0.7084 = Constant
H_T = The net heating value as determined in 40 CFR 60.18 (f)(3).

[40 CFR 60.18(f)]

Monitoring of Operations

D.9. Monitoring of operations. Each owner or operator seeking to comply with 40 CFR 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

(1) A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.

(2) A device that records flow to or bypass of the flare. The owner or operator shall either:

(i) (Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or

(ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line. [40 CFR 60.756(c)]

Test Methods and Procedures

D.10. Test Methods. When required, tests shall be performed in accordance with the following reference methods:

Method	Description of Method and Comments
3C	Determination of Carbon Dioxide, Methane, Nitrogen, and Oxygen from Stationary Sources
22	Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares

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. [Rule 62-297.401, F.A.C.]

D.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.]

D.12. Annual Compliance Tests Required. During each federal fiscal year (October 1st to September 30th), each EU shall be tested to demonstrate compliance with the emissions standards for opacity. [Rule 62-297.310(7), F.A.C.]

D.13. Test Methods and Procedures for Methane Concentration. For the performance test required in 40 CFR 60.752(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in 40 CFR 60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three 30-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under 40 CFR 60.18(f)(4). [40 CFR 60.754(e)]

D.14. Test Methods and Procedures for Opacity. See Specific Condition **D.8.**

Recordkeeping and Reporting Requirements

D.15. Reporting Schedule. The following reports and notifications shall be submitted to the Compliance Authority:

Report	Reporting Deadline	Related Condition(s)
Equipment Removal	30 days prior to removal or cessation	**D.17.**
Semi-annual Reports	30 days after the end of the semi-annual period	**D.18.**

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

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

D.17. Equipment Removal Reporting Requirement. Each owner or operator of a controlled landfill shall submit an equipment removal report to the Administrator 30 days prior to removal or cessation of operation of the control equipment.

(1) The equipment removal report shall contain all of the following items:

(i) A copy of the closure report submitted in accordance with paragraph (d) of 40 CFR 60.757;

(ii) A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and

(iii) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year.

(2) The Administrator may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 60.752(b)(2)(v) have been met. [40 CFR 60.757(e)]

D.18. Semi-annual Reports. Each owner or operator of a landfill seeking to comply with 40 CFR 60.752(b)(2) using an active collection system designed in accordance with 40 CFR 60.752(b)(2)(ii) shall submit to the Administrator semi-annual reports of the recorded information in (f)(1) through (f)(6) of 40 CFR 60.757. For enclosed combustion devices and flares, reportable exceedances are defined under 40 CFR 60.758(c).

(1) Value and length of time for exceedance of applicable parameters monitored under 40 CFR 60.756(a), (b), (c), and (d).

(2) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under 40 CFR 60.756.

(3) Description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating.

(4) All periods when the collection system was not operating in excess of 5 days.

(5) The location of each exceedance of the 500 parts per million methane concentration as provided in 40 CFR 60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.

(6) The date of installation and the location of each well or collection system expansion added pursuant to paragraphs (a)(3), (b), and (c)(4) of 40 CFR 60.755. [40 CFR 60.757(f)]

D.19. Flare Records. Except as provided in 40 CFR 60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in paragraphs (b)(1) through (b)(4) of 40 CFR 60.758 as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal.

(1) Where an owner or operator subject to the provisions of 40 CFR 60 Subpart WWW seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent. [40 CFR 60.758(b)(4)]

D.20. Operation Parameter Records. Except as provided in 40 CFR 60.752(b)(2)(i)(B), each owner or operator of a controlled landfill subject to the provisions of 40 CFR 60 Subpart WWW shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in 40 CFR 60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

(1) Each owner or operator subject to the provisions of 40 CFR 60 Subpart WWW shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40 CFR 60.756.

(2) Each owner or operator seeking to comply with the provisions of 40 CFR 60 Subpart WWW by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under 40 CFR 60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent. [40 CFR 60.758(c)(2) and (4)]

D.21. Exceedance Records. Except as provided in 40 CFR 60.752(b)(2)(i)(B), each owner or operator subject to the provisions of 40 CFR 60 Subpart WWW shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in 40 CFR 60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance. [40 CFR 60.758(e)]

D.22. Monthly Log. In order to demonstrate compliance with Specific Condition No. **D.3.,** the permittee shall maintain a monthly log at the facility for a period of at least five (5) years from the date the data is recorded, containing the following:

a. Date of record (Month/Day/Year); and

b. Hourly landfill gas flow rate to the flare.

[0950113-007-AC]

SECTION IV. APPENDICES.

The Following Appendices Are Enforceable Parts of This Permit:

Appendix A, Glossary.
Appendix G, Alternating Operating Parameter Values for Specified Gas Extraction Wells
Appendix I, List of Insignificant Emissions Units and/or Activities.
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 ZZZZ, 40 CFR 63 Subpart ZZZZ.
Appendix RR, Facility-wide Reporting Requirements.
Appendix TR, Facility-wide Testing Requirements.
Appendix TV, Title V General Conditions.