Waste Management Inc. of Florida
Collier County Landfill (a.k.a. Naples Sanitary Landfill)

Facility ID No. 0210051
Collier County

Title V Air Operation Permit Renewal

Permit No. **0210051-015-AV**
(Renewal of Title V Air Operation Permit No. 0210051-009-AV)

Permitting Authority:

State of Florida
Department of Environmental Protection
Air Resource Management, South District

2295 Victoria Avenue, Suite 365
P.O. Box 2459
Fort Myers, Florida 33902

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

Compliance Authority:

State of Florida
Department of Environmental Protection
Air Resource Management, South District

2295 Victoria Avenue, Suite 365
P.O. Box 2459
Fort Myers, Florida 33902

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

Title V Air Operation Permit Renewal

Permit No. 0210051-015-AV

Table of Contents

Section **Page Number**

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

II. Facility-wide Conditions. 4

III. Emissions Units and Conditions.
A. Landfill. 6
B. Flare. 13
C. Crusher. 15

IV. Appendices. 18
Appendix A, Glossary.
Appendix I, List of Insignificant Emissions Units and/or Activities.
Appendix ICE, Requirements for Internal Combustion Engines.
Appendix NESHAP, Subpart A – General Provisions.
Appendix NESHAP, Subpart M – National Emission Standards for Asbestos.
Appendix NESHAP, Subpart AAAA – National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills.
Appendix NESHAP, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
Appendix NSPS, Subpart A – General Provisions.
Appendix NSPS, Subpart CC – Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills.
Appendix NSPS, Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills.
Appendix RR, Facility-wide Reporting Requirements.
Appendix TR, Facility-wide Testing Requirements.
Appendix TV, Title V General Conditions.

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

Florida Department of Environmental Protection

South District Office
Post Office Box 2549
Fort Myers, Florida 33902-2549

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

PERMITTEE:
Waste Management Inc. of Florida
3750 White Lake Boulevard
Naples, Florida 34117

Permit No. 0210051-015-AV
Collier County Landfill
Facility Id No. 0210051
Title V Air Operation Permit Renewal

The purpose of this permit is to renew the Title V air operation permit for the above referenced facility. The existing Collier County Landfill is located in Collier County at 3750 White Lake Boulevard, Naples, Florida 34117. UTM Coordinates are: Zone 17, 433.92 East and 2893.22 North. Latitude is: 26/09/30 North; and, Longitude is: 81/39/30 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, 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: **July 13, 2011**
Renewal Application Due Date: **November 30, 2015**
Expiration Date: **July 12, 2016**

_____
Jon M. Iglehart
Director of
District Management

JMI/SRM/jw

Subsection A. Facility Description.

The existing facility is a Class 1 municipal solid waste landfill. The landfill has an active gas collection and control system with a 3,000 scfm flare. A portable concrete crusher is authorized to operate on the site.

The Collier County Landfill has a design capacity of 14.1 million megagrams (Mg) by volume. The landfill commenced construction and started receiving waste in 1979. The landfill was modified or reconstructed in 1996, 2001 and 2003. The landfill contains an active asbestos waste disposal site. The landfill does not contain a bioreactor. The gas collection and control system commenced operation on January 24, 1997. The non-methane organic compounds (NMOC) emissions are calculated to be greater than 50 Mg per year.

The landfill consists of the active cells and closed cells. Active cells are A1, A2, A3 and phase 3 of cell 6. Cell 6 is broken into three phases. Closed cells are phase 1 and 2 of cell 6 (closed in 2000) and cells 3 and 4 closed in 1995. Cells A1, A2, and A3 began accepting waste in 2005, 2007 and 2009, respectively. Cells 3 and 4 began accepting waste in 1979. Cell 6 began accepting waste in 1988.

The facility is subject to 40 CFR 60 Subpart A, General Provisions, 40 CFR 60 Subpart CC, Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills, 40 CFR 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills, 40 CFR 61 Subpart M, National Emissions Standards for Asbestos, 40 CFR 63 Subpart A, General Provisions, 40 CFR 63 Subpart AAAA, National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills and 40 CFR 63 Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

The existing facility is a major Prevention Significant Deterioration (PSD) facility. (The facility was issued on April 12, 2010, an air construction permit (no. 0210051-014-AC) for a landfill gas to energy project. As stated in Permit no. 0210051-014-AC, upon issuance of the permit, the facility became a major PSD facility.)

The existing facility has the potential to emit the following pollutants: 140.0 tons per year (TPY) carbon monoxide (CO), 45.45 TPY nitrogen oxides (NO_X), 49.39 TPY volatile organic compounds (VOC), 135.88 TPY sulfur dioxides (SO_2), and 42.27 TPY particulate matter (PM). The landfill is a minor source of HAP.

Subsection B. Summary of Emissions Units.

EU No.	Brief Description
Regulated Emissions Units	
002	Landfill Non-methane Organic Compounds (NMOC)
003	Flare
005	Crusher
016	CI RICE (backup diesel generator)

Subsection C. Applicable Regulations.

Based on the Title V air operation permit renewal application received October 22, 2010, this facility is not a major source of hazardous air pollutants (HAP). Because this facility operates a stationary reciprocating internal combustion engine, it is subject to regulation under 40 CFR 63, Subpart ZZZZ, - National Emissions Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines. However, this engine qualifies for one of the categorical exemptions listed in Rule 62-210.300(3)(a), F.A.C. See Appendix ICE. A summary of applicable regulations is shown in the following table.

Regulation	EU No(s).
40 CFR 60 Subpart A, General Provisions	002, 003, 005
40 CFR 60 Subpart CC, Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills	002, 003

40 CFR 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills	002, 003
40 CFR 61 Subpart M, National Emissions Standard for Asbestos	002, 003
40 CFR 63, Subpart A, General Provisions	002, 006
40 CFR 63, Subpart AAAA, National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills	002, 003, 016
40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	006
62-296.320, F.A.C.	002, 003, 005, 016
62-296.370, F.A.C.	002, 003, 005, 016
62-213.440, F.A.C.	002, 003, 005, 016
62-213.205, F.A.C.	002, 003, 005, 016
62-210.370, F.A.C.	002, 003, 005, 016
62-210.300, F.A.C.	002, 003, 005, 016
62-213.420, F.A.C.	002, 003, 005, 016
62-297.310, F.A.C.	002, 003, 005, 016
62-4.160, F.A.C.	002, 003, 005, 016
62-296.100, F.A.C.	002, 003, 005, 016
62-213.410, F.A.C.	002, 003, 005, 016

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. 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. Speed limits posted at the facility.
b. Maintaining paved roadways.
c. Watering unpaved roads.
d. Sweeping paved roads.
e. Vegetate areas of final and intermediate cover in accordance with solid waste rules.

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

Annual Reports and Fees

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

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. A copy shall also be submitted to EPA at U.S.

EPA Region 4, Air and EPCRA Enforcement Branch, 61 Forsyth Street, Atlanta, GA 30303. [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]

Subsection A. Emissions Unit 002

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

EU No.	Brief Description
002	Landfill

Emission Unit 002 is a municipal solid waste landfill with a design capacity of 14.1 million megagrams (Mg) by volume. The landfill commenced construction and started receiving waste in 1979. The landfill has an active gas collection and control system in both active and closed cells. Collection and control of landfill gas (LFG) emissions began on January 24, 1997. The landfill was modified or reconstructed in 1996, 2001 and 2003. The non-methane organic compounds (NMOC) emissions are calculated to be greater than 50 Mg per year.

{*Permitting Note: This emissions unit is subject to 40 CFR 60 Subpart A, General Provisions, 40 CFR 60 Subpart CC, Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills, 40 CFR 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills, 40 CFR 61 Subpart M, National Emissions Standards for Asbestos, 40 CFR 63 Subpart A, General Provisions and 40 CFR 63 AAAA, National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills.}*

Essential Potential to Emit (PTE) Parameters

A.1. Hours of Operation. This emissions unit may operate continuously (8760 hours per year). [Rule 62-210.200(PTE), F.A.C.]

A.2. 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.3. Gas Collection and Control System (GCCS). The owner or operator shall install and operate an active collection system and control devices that meet the requirements of 40 CFR 60.752(b)(2)(i)(A), 40 CFR 60.752(b)(2)(iii), and 40 CFR 60.752(b)(2)(iv) and 40 CFR 60.759 unless alternative procedures have been approved by the permitting authority as provided by 40 CFR 60.752(b)(2)(i)(C) and (D). The owner or operator shall place each well or design component as specified in the approved design plan. Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of 5 year or more if active, or 2 years or more if closed or at final grade.
[40 CFR 60.759 and 60.752(b)(2)]

A.4. Removal of GCCS. The collection and control system may be removed if the following requirements are met:

a. *Definition of Closed Landfill*. The landfill shall be a closed landfill as defined in 40 CFR 60.751 of Subpart WWW.
b. *Closure Report*. A closure report shall be submitted to the South District as provided in 40 CFR 60.757 of Subpart WWW;
c. *Minimum Years of Operation*. The collection and control system shall have been in operation minimum of 15 years; and
d. *NMOC*. The calculated NMOC produced by the landfill shall be less than 50 megagrams per year on three (3) successive test dates and following the procedures specified in 40 CFR 60.754(b) of Subpart WWW. The test dates shall be not less than 90 days apart, and no more than 180 days apart.

[40 CFR 60.752(b)(2)(v)],

Emission Limitations and Standards

A.5. Methane Concentration. The owner or operator shall operate the system so that the methane concentration is less than 500 ppm above background at the surface of the landfill. [40 CFR 60.753(d)]

A.6. Sulfur Content. The sulfur content of the landfill gas shall not exceed 1000 parts per million by volume (ppmv) based upon a rolling average of four (4) quarterly samples collected for sulfur content. [Permit No. 0210051-014-AC]

A.7. NMOC Emission Calculations for Removal of GCCS. The owner or operator shall calculate the NMOC emission rate for purposes of determining when the systems can be removed in accordance with 40 CFR 60.754(b). [40 CFR 60.754(b)]

A.8. Start, Shutdown and Malfunction Plan. In accordance with 40 CFR 63.1960, 40 CFR 63.1965 and 40 CFR 63.1990 of Subpart AAAA, the owner or operator must develop a written start, shutdown and malfunction (SSM) plan according to the provisions in 40 CFR 63.6(e)(3) if a deviation occurs. A deviation means any instance in which the facility or the owner or operator of the facility:

a. Fails to meet any requirement or obligation established in 40 CFR 63, Subpart AAAA, including but not limited to, any emissions limitations (including any operating limit) or work practice standard;
b. Fails to meet any term or condition that is adopted to implement an applicable requirement in 40 CFR 63 Subpart AAAA and that is included in the operating permit for the facility;
c. Fails to meet any emission limitation (including any operating limit) or work practice standard in 40 CFR 63 during SSM, regardless of whether or not such failure is permitted by 40 CFR 63 Subpart AAAA.

Deviations include:

a. When the control device operating parameter boundaries described in 40 CFR 60.758(c)(1) of subpart WWW are exceeded.
b. When 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour, The 3-hour block average used to demonstrate compliance shall be calculated in accordance with 40 CFR 63.1975.
c. When a SSM plan is not developed or maintained on site.

[40 CFR 63.1960, 40 CFR 63.1965, 40 CFR 63.1990, 40 CFR 63.1975]

A.9. 40 CFR 63 Subpart AAAA Compliance. The owner or operator shall comply with the requirements of 40 CFR 63.1955 in Subpart AAAA. [40 CFR 63.1955]

Excess Emissions

Rule 62-210.700 (Excess Emissions), F.A.C. cannot vary any requirement of an NSPS, NESHAP or Acid Rain program provision.

A.10. Excess Emissions Prohibited. The regulations of 40 CFR 60 Subpart WWW shall apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices. [40 CFR 60.755(e)]

Monitoring of Operations

A.11. Operational Standards. The owner or operator shall comply with the following operational standards for collection and control system in accordance with 40 CFR 60.753:

a. *Operation of Collection System*. Operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:
   i. 5 years or more if active; or
   ii. 2 years or more if closed or at final grade.
b. *Negative Pressure*. Operate the collection system with negative pressure at each wellhead except under the following conditions:
   i. A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in 40 CFR 60.757(f)(1);
   ii. Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan;

iii. A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Administrator;

c. *Interior Wellhead Operating Parameters*. Operate each interior wellhead in the collection system with a landfill gas temperature less than 55 °C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

i. The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by §60.752(b)(2)(i).

ii. Unless an alternative test method is established as allowed by §60.752(b)(2)(i) of this subpart, the oxygen shall be determined by an oxygen meter using Method 3A or 3C except that:

1. The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;
2. A data recorder is not required;
3. Only two calibration gases are required, a zero and span, and ambient air may be used as the span;
4. A calibration error check is not required;
5. The allowable sample bias, zero drift, and calibration drift are ±10 percent.

d. *Methane Concentration Above Background*. Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

e. *Venting of Gases to Control System*. Operate the system such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR 60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour; and

f. *Frequency of Operation*. Operate the control or treatment system at all times when the collected gas is routed to the system.

g. *Corrective Actions*. If monitoring demonstrates that the operational requirements in sub-paragraphs (b), (c), or (d) of this condition are not met, corrective action shall be taken as specified in 40 CFR 60.755(a)(3) through (5) or 60.755(c) of Subpart WWW. If corrective actions are taken as specified in 40 CFR 60.755, the monitored exceedance is not a violation of the operational requirements in this section.

[40 CFR 753]

A.12. Net Heating Value. The owner or operator shall sample and analyze the landfill gas for the net heating value at least once per quarter. The results shall be included in the annual operating report. Net heat content may be calculated based on methane concentration readings obtained from calibrated handheld field instruments. [Permit No. 0210051-004-AC]

A.13. Monthly Measurements. In accordance with 40 CFR 60.755(a)(3) and (5) and 40 CFR 753, the owner or operator shall install a sampling port and a thermometer, other measuring device, or an access port for temperature measurements at each wellhead and

a. *Gauge Pressure*. Measure the gauge pressure in the gas collection header on a monthly basis, and

b. *Nitrogen or Oxygen Concentration*. Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis, and

c. *Temperature*. Monitor temperature of the landfill gas on a monthly basis.
[40 CFR 60.755 and 40 CFR 60.756(a)]

A.14. Open Flare Operating Requirements. Each owner or operator using an open flare to comply with 60.752(b)(2)(iii) shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

a. *Heat Sensing Device*. 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.
b. *Instrument to Record Flow or Bypass of Flare*. 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)]

A.15. Alternative GCCS Specifications or Monitoring Parameters. Each owner or operator seeking to install a collection system that does not meet the specifications in 40 CFR 60.759 or seeking to monitor alternative parameters to those required by 40 CFR 60.753 through 60.756 shall provide information satisfactory to the Administrator as provided in 40 CFR 60.752(b)(2)(i) (B) and (C) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Permitting Authority may specify additional appropriate monitoring procedures. [40 CFR 60.756(e)]

A.16. Methane Surface Concentration Monitoring. Each owner or operator seeking to demonstrate compliance with 40 CFR 60.753(d) and 40 CFR 60.755(c), shall monitor surface concentrations of methane according to the procedures in 40 CFR 60.755(c) and according to the instrument specifications and procedures provided in 40 CFR 60.755(d). Any closed landfill that has no monitored exceedances of the operational standard in three (3) consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring. [40 CFR 60.756(f)]

Test Methods and Procedures

A.17. Test Methods. Required tests shall be performed in accordance with the following reference methods:

Method	Description of Method and Comments
2E	Determination of Landfill Gas; Gas Production Flow Rate
3C	Determination of Carbon Monoxide, Methane, Nitrogen, and Oxygen for Stationary Sources
16	Semicontinuous Determination of Sulfur Emissions from Stationary Sources
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography
21	Determination of Volatile Organic Compound Leaks
25C	Determination of Nonmethane Organic Compound (NMOC) in Municipal Solid Waste Landfill Gases

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. [62-297.401, F.A.C., 40 CFR 60 Subpart WWW]

A.18. 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.19. Sulfur Analysis.

a. *Frequency.* The owner or operator shall sample and analyze the LFG for site specific sulfur content (total reduced sulfur content) at least once per quarter during each calendar year.

b. *Testing Methods.* Compliance with the sulfur content shall be demonstrated using EPA Method 16. The gas sample shall be collected from the gas collection system header pipe at a location before all flares and engines. The gas sample collected for the analyses shall be a composite sample and collected under normal operating conditions (i.e., with all valves open for all operating cells). Based on the sampling results and Rule 62-297.310(7)(b), F.A.C., the Department may request additional gas sampling and analyses. [Permit No. 0210051-014-AC]

A.20. Test Requirements: The owner or operator shall notify the Compliance Authority by telephone, email, fax or in writing at least 5 days prior to the quarterly sampling tests. [Permit No. 0210051-014-AC]

A.21. Testing Duration. Sulfur analysis required in Specific Condition **A.19.** shall be performed for a period of 5 years from the date of this permit. After 5 years of testing, the permittee may request to relax the requirements for sulfur analysis testing and frequency of testing through a modification to the air construction permit. [Permit No. 0210051-014-AC]

A.22. Surface Methane Testing. The owner or operator shall monitor the surface concentrations of methane in accordance with the procedures described in 40 CFR 60.753(d) and 40 CFR 60.755(c). The owner or operator shall comply with the instrumentation specifications and procedures for surface emission monitoring devices in accordance with 40 CFR 60.755(d). [40 CFR 60.753 and 60.755]

A.23. GCCS Compliance Determination. The specified methods in Specific Condition **A.11**. shall be used to determine whether the gas collection system is in compliance with the specification for an active collection system as required by 40 CFR 60.752(b)(2)(ii). [40 CFR 60.755(a)]

Recordkeeping and Reporting Requirements

A.24. Reporting Schedule. The following reports and notifications shall be submitted to the Compliance Authority:

Report	Reporting Deadline	Related Condition(s)
NMOC Emission Rate Report	Annually (See exemption criteria Specific Condition A. 18.)	**A.30.**
Closure Report	With 30 days of waste acceptance cessation	**A.31.**
Equipment Removal Report	30 days prior to removal or cessation of operation of control equipment	**A.32.**
Semi-Annual Reports		**A.33.**
Total Reduces Sulfur Report	Semi-annual	**A.26**
SO_2 Emissions Reporting	Annual	**A.27**

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

A.25. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements.

A.26. Test Reports/Reporting. The owner or operator shall prepare and submit a report for the LFG TRS content test results to the South District Department in accordance with Appendix D, (Common Testing Requirements). Test results shall report the results on the total reduced sulfur content in ppmv as sulfur (S). Test reports and

results shall be submitted with the facility's semi-annual reports. [Permit No. 0210051-014-AC; Rule 62-4.070(3), F.A.C.]

A.27. Annual SO_2 Reporting. Annual SO_2 emissions shall be based on the rolling average of the four calendar year quarterly LFG sulfur content analysis results, and shall be included in the annual operating report. See Condition 2. [Permit No. 0210051-014-AC]

A.28. Deposited Solid Waste Records. The owner or operator shall keep for a least 5 years up-to-date, readily accessible, on-site records of the current amount of solid waste in –place, and the year by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable. [40 CFR 60.758(a)]

A.29. Control Equipment Records. The owner or operator shall keep up-to-date, readily accessible records for the life of the control equipment of the following data 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.

a. The maximum expected gas generation flow rate as calculated in 40 CFR 60.755(a)(1).
b. The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR 60.759(a)(1).
c. The flare type.
d. All visible emission readings.
e. Heat content determination.
f. Flow rate or bypass flow rate measurements.
g. Exit velocity determinations made through the performance tests.
h. Continuous records of pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.
i. Continuous records of the equipment operating parameters specified to be monitored in 40 CFR 60.756.
j. Up-to –date readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.
k. 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 (see 40 CFR 60.756.).
l. 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 of flare pilot flame is absent.
m. Plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.
n. Records of the installation date and location of all newly installed collectors as specified under 40 CFR 60.755(b).
o. Documentation of the nature, date of deposition, amount, and location of asbestos-containing or non-degradable waste excluded from collection as provided in 40 CFR 60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in 40 CFR 60.759(a)3(ii).
p. Records of all collection and control exceedances of the operational standards in 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(b)]

A.30. NMOC Emission Rate Reports. The owner or operator shall submit an NMOC emission rate report to the South District office annually in accordance with 40 CFR 60.757(b). The owner or operation is exempt from submitting an annual report during such time as the collection and control system is in operation and in compliance with 40 CFR 60.753 and 60.755. [40 CFR 60.757(b)]

A.31. Closure Report. The owner or operator shall submit a closure report to the South District office within 30 days of waste acceptance cessation. [40 CFR 60.757(d)]

A.32. Equipment Removal Report. The owner or operator shall submit an equipment removal report to the South District office 30 days prior to removal or cessation of operation of the control equipment. The equipment removal report shall contain all of the following information in a. through d. below. The South District 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.

a. *Closure Report*. A copy of the closure report submitted in accordance with Specific Condition **A.31.**
b. *Initial Performance Test Report*. A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired
c. *NMOC Emission Rate Reports*. Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 Mg or greater of NMOC per year
[40 CFR 60.757(e)]

A.33. Semi-Annual Reports. The owner or operator shall submit semi-annual reports in accordance with 40 CFR 60.757(f) of the following recorded information:

a. *Exceedance Value and Time Period*. Value and length of time for exceedance of applicable parameters monitored under 40 CFR 60.756(a), (b), (c), and (d).
b. *Diversion of Gas Stream*. 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 in 40 CFR 60.756.
c. *Non-Operational Control Devices*. 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.
d. *Non-Operational Collection System*. All period when the collection system was not operating in excess of 5 days.
e. *Methane Exceedances*. The location of each exceedance of the 500 parts per million methane concentration and the concentration recorded at each location for which an exceedance was recorded the previous month.
f. The date of install and the location of each well or collection system expansion added pursuant 40 CFR 60.755.
[40 CFR 63.1980(a), 40 CFR 60.757(f)]

{*Permitting Note: 40 CFR 63 Subpart AAAA requires semi-annual reporting which more stringent than 60 CFR 60 Subpart WWW which requires annual reporting.*}

A.34. Other Records and Reports. The owner or operator must keep records and reports specified in the general provisions of 40 CFR 60 and as shown in Table 1 of 40 CFR 63 Subpart AAAA. [40 CFR 63.1980(b)]

Other Requirements

A.35. 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 and 40 CFR 60, Subpart CC - Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills, 40 CFR 61 Subpart M – National Emissions Standards for Asbestos 40 CFR 63, and Subpart AAAA, National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills, attached to this permit as Appendix NSPS A and Appendix WWW, Appendix CC, Appendix M and Appendix AAAA, respectively. [Rule 62-213.440, F.A.C.]

Subsection B. Emissions Unit 003

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

EU No.	Brief Description
003	Flare

Emissions unit 003 is a LFG Specialties, LLC (model number CF122810) 3,000 scfm open flare. The flare has a stack height of 72 feet (68 foot flare and 4 foot foundation), an exit temperature of 1,400°F, an exit diameter of 1 ft. and actual volumetric flow rate of 3000 acfm. The flare commenced operation in June 2001.

Essential Potential to Emit (PTE) Parameters

B.1. Permitted Capacity. The process rate shall not exceed 3000 SCFM of landfill gas. The maximum heat input rate shall not exceed 91 MMBtu/hr. [Permit Nos. 0210051-004-AC and 0210051-006-AC; Rules 62-4.160(2), 62-204.800, 62-210.200(PTE)]

B.2. Methods of Operation. The operation of the flare shall comply with the requirements of 40 CFR 60.18 of Subpart A. [Rule 62-213.410, F.A.C.; and, Permit Nos. 0210051-004-AC and 0210051-006-AC]

B.3. Hours of Operation. This emissions unit may operate continuously (8,760 hours/year). [Rule 62-210.200(PTE), F.A.C.]

B.4. 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.5. Flare Height. The height of the flare shall be 22 meters (72 feet) above grade, including the foundation. [Permit Nos. 0210051-004-AC and 0210051-006-AC]

Emission Limitations and Standards

Unless otherwise specified, the averaging time for Specific Condition **B.6** is based on the specified averaging time of the applicable test method.

B.6. Visible Emissions. The flare shall be operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours. [40 CFR 60.18(c)]

Excess Emissions

Rule 62-210.700 (Excess Emissions), F.A.C. cannot vary any requirement of an NSPS, NESHAP or Acid Rain program provision.

B.7. Excess Emissions Prohibited. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

Monitoring of Operations

B.8. Gas Flow. The landfill gas flow to the flare shall be measured by an integrating flow meter. [Permit Nos. 0210051-004-AC and 0210051-006-AC]

Test Methods and Procedures

B.9. Test Methods. 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

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. [62-297.401, F.A.C., Permit Nos. 0210051-004-AC and 0210051-006-AC]

B.10. Common Testing Requirements. The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. The minimum visible emission test duration shall be 2 hours. 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.; 40 CFR 60.18]

B.11. Annual Compliance Tests Required. During each federal fiscal year (October 1st to September 30th), the EU shall be tested to demonstrate compliance with the emissions standards for VE. [Rule 62-297.310(7), F.A.C. and Permit Nos. 0210051-004-AC and 0210051-006-AC]

B.12. Compliance Tests Prior To Renewal. Compliance tests shall be performed for VE once every 5 years. The tests shall occur prior to obtaining a renewed operating permit to demonstrate compliance with the emission limits in Specific Condition **B.6.** [Rules 62-210.300(2)(a) and 62-297.310(7)(a), F.A.C.]

Recordkeeping and Reporting Requirements

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

B.14. Flow Meter Recordings. Readings of the landfill gas integrating flow meter shall be monitored and recorded in a logbook on a daily basis as a reasonable assurance that compliance with the flare process rate limit and that compliance with 40 CFR 60.756(c) is being achieved. [Permit Nos. 0210051-004-AC and 0210051-006-AC]

[Permitting Note: EU001, the flare, is equipped with a continuous chart recorder. These charts are acceptable instead of a separate logbook as long as they meet the requirement of 40 CFR 60.756(c)(2)(i).}

Other Requirements

B.15. 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, attached to this permit as Appendix NSPS A and Appendix WWW, respectively. [Rule 62-213.440, F.A.C.]

Subsection C. Emissions Unit 005

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

EU No.	Brief Description
005	Relocatable Crusher

Emission unit 005 is a relocatable crusher owned by a third party.

Essential Potential to Emit (PTE) Parameters

C.1. Hours of Operation. This emissions unit may operate continuously (8760 hours per year). [Permit No. 0210051-008-AC]

C.2. 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.]

C.3. Authorized Portable Crushers. Only a crusher that is authorized to operate under a current air general permit may operate at the facility. [Permit No. 0210051-008-AC]

{Permitting Note: Once the crusher is located on the site of the landfill, the owner or operator of the landfill is solely responsible for demonstration of compliance with all state and federal regulations. The general permit is not effective when the crusher is located and operating on the Collier County landfill site.}

Emission Limitations and Standards

Unless otherwise specified, the averaging times for Specific Condition **C.5.** is based on the specified averaging time of the applicable test method.

C.4. Applicable 40 CFR Subpart OOO Emissions Limitations. If the rated capacity of the portable crusher is 150 tons per hour (TPH) or greater, the crusher is subject to the emission limitations and requirements of 40 CFR 60 Subpart OOO, Standards or Performance for Nonmetallic Mineral Processing Plants. [40 CFR 60 Subpart OOO] 0210051-008-AC]

C.5. PM and VE Emissions.

a. *Crusher With Capture System*. If the crusher is equipped with a capture system used to capture and transport PM to a control device and subject to Subpart OOO the following emissions limits shall not be exceeded:

   i. For crushers that commenced construction, modification or reconstruction after August 31, 1983 but before April 22, 2008:
      1. PM Limit. The PM limit shall not exceed 0.05 g/dscm 90.022 gr/dscf)
      2. VE limit. The opacity shall not exceed 7 percent for dry control devices.

   ii. For crushers that commenced construction, modification or reconstruction after on or after April 22, 2008:
      1. PM Limit. The PM limit shall not exceed 0.032 g/dscm (0.014 gr/dscf)
      2. VE limit. VE shall not exceed 7 percent opacity for dry control devices on individual enclosed storage bins

b. *Crusher Without Capture System and for Fugitive Emissions from Capture System.* If the crusher is not equipped with a capture system and for fugitive emissions escaping from capture systems and subject to Subpart OOO the following emissions limits shall not be exceeded:

   i. For crushers that commenced construction, modification or reconstruction after August 31, 1983 but before April 22, 2008:
      1. VE limit.
         a. VE shall not exceed 10 percent opacity for grinding mill, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins enclosed truck or railcar loading stations or from any other affected facility.

b. Visible emissions shall not exceed 15% opacity for the crusher.

ii. For crushers that commenced construction, modification or reconstruction on or after April 22, 2008:

a. VE shall not exceed 7 percent opacity for grinding mill, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins enclosed truck or railcar loading stations or from any other affected facility.
b. Visible emissions shall not exceed 12% opacity for the crusher.

[40 CFR 60.672]

C.6. Unconfined Emissions. Pursuant to Rule 62-296.320, F.A.C., the following reasonable precautions shall be employed to control unconfined emissions of particulate matter.

a. *From Nonmetallic Mineral Processing Plants*. Unconfined emissions from all relocatable nonmetallic mineral processing plants, except those located at mines or quarries and processing only material from onsite natural deposits, and all stationary nonmetallic mineral processing plants that process dry material shall be controlled by using a water suppression system with spray bars located wherever unconfined emissions occur at the feeder(s), the entrance and exit of the crusher(s), the classifier screens, and the conveyor drop points.
b. *From Vehicular Traffic or Wind.* Unconfined emissions generated by vehicular traffic or wind shall be controlled by applying water (by water trucks equipped with spray bars) or effective dust suppressant(s) on a regular basis to all stockpiles, roadways and work yards where the nonmetallic mineral processing plant is located.

[Permit No. 0210051-008-AC]

C.7. Visible Emissions (VE). Visible emissions from any crusher, grinding mill, screening operation, bucket elevator, transfer point on belt conveyors, bagging operation, storage bin, enclosed truck or railcar loading station, or any other affected emission point at a nonmetallic mineral processing plant not subject to 40 CFR Part 60, Subpart OOO, shall be less than twenty percent (20%) opacity, pursuant to Rule 62-296.320, F.A.C. [Permit No. 0210051-008-AC]

Test Methods and Procedures

C.8. Test Methods. Required tests shall be performed in accordance with the following reference methods:

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
5	Method for Determining Particulate Matter Emissions (All PM is assumed to be PM_{10}.)
9	Visual Determination of the Opacity of Emissions from Stationary Sources
17	Determination of Particulate Matter Emissions 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. [62-297.401, F.A.C., 40 CFR 60 Subpart OOO, Permit No. 0210051-008-AC]

C.9. 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.]

C.10. Annual Compliance Tests Required. During each federal fiscal year (October 1st to September 30th), each crusher that is subject to OOO shall be tested to demonstrate compliance with the emissions standards for VE and PM. Compliance with this condition may be demonstrated by obtaining and maintaining a copy of the PM

and VE testing from the crusher owner. The PM and VE test report must have been conducted and satisfactorily demonstrated to show compliance with the PM and VE emission limits in Specific Conditions C.4 and C.5 within the prior 12 months. [Rule 62-297.310(7), F.A.C. and Permit No. 0210051-008-AC]

C.11. Performance Test Methods. The annual visible emissions performance tests shall be conducted in accordance with the test methods and procedures set forth at Subpart OOO. All test results shall be reported to the Department in accordance with the provisions of Rule 62-297.310, F.A.C. [Rule 62-210.310(5)(e)3.e., F.A.C.]

C.12. Additional Compliance Test Requirements. Unless otherwise stated in this permit, test procedures shall be in accordance with 40 CFR 60.675. [40 CFR 60.675]

Recordkeeping and Reporting Requirements

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

C.14. Notification of Crusher On-Site. The owner or operator shall submit notification to the South District of the initial startup of each crusher within three (3) days of initial startup of operations at the facility.

C.15. Recordkeeping. The owner or operator shall maintain on site for a period of five (5) years the following records:

a. The start date and the end date for each crusher that operates at the facility
b. The make and model of each crusher,
c. The capacity of each crusher,
d. The daily hours of operation of each crusher, and
e. The fuel type and usage.
f. Copy of PM and VE compliance demonstration testing for each crusher that is located onto the landfill site.

[Permit No. 0210051-008-AC; 62-4.070(3)]

Other Requirements

C.16. 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 OOO– Standards or Performance for Nonmetallic Mineral Processing Plants. [Rule 62-213.440, F.A.C.

SECTION IV. APPENDICES.

The Following Appendices Are Enforceable Parts of This Permit:

Appendix A, Glossary.
Appendix I, List of Insignificant Emissions Units and/or Activities.
Appendix ICE, Requirements for Internal Combustion Engines.
Appendix NESHAP, Subpart A – General Provisions.
Appendix NESHAP, Subpart M – National Emission Standards for Asbestos.
Appendix NESHAP, Subpart AAAA – National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills.
Appendix NESHAP, Subpart ZZZZ, - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.
Appendix NSPS, Subpart A – General Provisions.
Appendix NSPS, Subpart Cc. – Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills.
Appendix NSPS, Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills
Appendix RR, Facility-wide Reporting Requirements.
Appendix TR, Facility-wide Testing Requirements.
Appendix TV, Title V General Conditions.