

USA Waste Services, Inc.
Berman Road Landfill

Facility ID No.: 0930104
Okeechobee County

Title V Air Operation Permit
FINAL Permit No.: 0930104-002-AV

Florida Department of Environmental Protection
Southeast District Office, Air Program
PO Box 15425, West Palm Beach, Florida, 33416
(Street address: 400 North Congress Avenue
West Palm Beach, Florida, 33401)
Telephone: 561-681-6600
Fax: 561-681-6790

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Section I. Facility Information

Subsection A. Facility Description

This facility is engaged in the disposal of municipal solid waste.

Also included in this permit are miscellaneous exempt emissions activities.

Based on the Title V permit application received march 11, 1997, this is not a major source of Hazardous Air Pollutants (HAPs).

Subsection B. Emission Units Summary

This permit addresses the following air pollution emission unit:

Regulated Emissions Unit:

Emissions Unit Number	Emissions Unit Description
001	Municipal solid waste landfill with an enclosed flare

This permit also addresses the following air pollution activities which are deemed to be exempt from permitting, based on the information provided by the applicant to the Department:

Exempt Activity Description
Aeration of the leachate storage ponds. [F.A.C. Rule 62-213.430(6)]
Operation of propane powered back-up generators for the scalehouse. [F.A.C. Rule 62-213.430(6)]

Exempt activities have no emission unit specific conditions, but are subject to applicable general pollutant emission limiting standards specified in Part II of this permit.

Subsection C. Relevant Documents

The documents listed below are not a part of this permit, but are relevant to this permitting action.

Initial Title V Permit Application received March 11, 1997

The documents listed below are not a part of this permit, however, are specifically related to this permitting action.

Appendix A: Abbreviations, Acronyms, Rule Citations, & ID Numbers

Appendix H: Permit History/Transfers

Appendix S: Permit Summary,

Table S-1 Summary of Air Pollutant Emission Standards

Table S-2 Summary Of Compliance Reporting Requirements For Msw Landfills

Table S-3. Summary Of Monitoring Requirements For Msw Landfills

Table S-4. Summary Of Recordkeeping Requirements For Msw Landfills

Final Report
5/1/97

Subsection D. Permit Appendices

The documents listed below are part of this permit provide necessary supplementary information applicable to this permitting action.

Appendix B: Applicable Definitions

Appendix C: Certification of Compliance Report

Appendix SS-1: Stack Sampling Facilities

Appendix TV: Title V Conditions

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit ID No. on all correspondence, test report submittals, applications, etc.

Section II. Facility-Wide Conditions

The conditions in this section generally apply to all emission units and activities associated with this facility and to the facility as a whole. Some of these conditions duplicate conditions described elsewhere in this permit, but are provided here also for ease of understanding.

1.0 Administrative Requirements

- 1.1 **Regulating Agencies:** All applications, tests, reports, notifications, or other submittals required by this permit shall be submitted to the Florida Department of Environmental Protection, Southeast District Office, Air Program at PO Box 15425, West Palm Beach, Florida, 33416 (street address 400 North Congress Avenue, West Palm Beach, Florida, 33401, phone 561-681-6600).
- 1.2 **Federal Enforceability:** All terms and conditions of this Title V permit are enforceable by the EPA and citizens under the Clean Air Act (CAA) except where otherwise noted. [Rule 62-210.200, F.A.C., Definitions - Federally Enforceable; and 40 CFR 70.6(b), Permit Content - Federally Enforceable Requirements]
- 1.3 **Title V Core Conditions:** The owner or operator shall be aware of, and operate in accordance with, the attached Title V Core Conditions, Appendix Title V. [Rules 62-4, 62-103, 62-204, 62-210, 62-213, 62-256, 62-257, 62-281 and 62-296, F.A.C.]

Note: Appendix TV, Title V Core Conditions, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided one copy when requested or when otherwise appropriate.

- 1.4 **Renewal of This Permit Required:** An application for renewal of this operation permit must be submitted to the Department of Environmental Protection, Southeast District Office, Air Program **at least 60 days prior** to the expiration date of this permit. To apply for an operation permit, the applicant shall submit the appropriate application form in quadruplicate, the appropriate application fee, all required compliance test results, and such additional information as the Department may by law require. [F.A.C. Rule 62-4.030, 62-4.050, and 62-4.220]

2.0 General Pollutant Emission Limiting Standards

- 2.1 ***The following state enforceable condition has no federally enforceable basis.***
Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [F.A.C. Rule 62-296.320(2)]
- 2.2 **General Visible Emissions Standard:** Unless otherwise specified by permit or rule, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than 20 percent opacity. [F.A.C. Rule 62-296.320(4)(b)]
- 2.3 ***The following state enforceable condition has no federally enforceable basis.***
Volatile Organic Compounds/Organic Solvents Emissions: [F.A.C. Rule 62-296.320(1)]

No person shall 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.

Such controls include the following:

- Maintain all pipes, valves, fittings, etc., which handle VOCs in good operating condition.

- Immediately confine and clean up VOC spills and make sure wastes are placed in closed containers for reuse, recycling or proper disposal.

2.4 ***The following state enforceable condition has no federally enforceable basis.***
Unconfined Emissions of Particulate Matter: [F.A.C. Rule 62-296.320(4)(c)]

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 include the following:

- Paving and maintenance of roads, parking areas and yards.
- Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
- Application of asphalt, water, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
- 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.
- Landscaping or planting of vegetation.
- Posting and enforcing a speed limit for vehicles traveling on roadways on site.

3.0 Operation Requirements

- 3.1 Circumvention: No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. [F.A.C. Rule 62-210.650]
- 3.2 Excess Emissions: [F.A.C. Rule 62-210.700]

Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing best operational practices to minimize emissions are adhered to, and the duration of excess emissions shall be minimized but in no case exceeds two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

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.

4.0 Compliance Testing Requirements

- 4.1 Test Notification: Unless otherwise specified in this permit, the Department of Environmental Protection, Southeast District Office, Air Program shall be notified in writing of expected compliance test dates at least fifteen (15) days prior to compliance testing. The notification shall include the following information: the date, time, and location of each test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner. [F.A.C. Rule 62-297.340(1)]
- 4.2 Testing at Capacity: Compliance testing shall be conducted with the emission units operating at the permitted capacity (90 to 100% of the maximum permitted operation rate of the emission units). If an emissions unit is not tested at permitted capacity, the emission unit shall not be operated above 110% of the test load until a new test showing compliance is conducted. Operation of the emissions unit above 110% of the test load is allowed for no more than 15 days for the purpose of conducting additional

compliance testing to regain the authority to operate at the permitted capacity. [F.A.C. Rule 62-297.310(2)]

- 4.3 Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard in Rules 62-204 through 62-297 or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [F.A.C. Rule 62-297.310(7)(b)]

5.0 Reporting and Record Keeping Requirements

- 5.1 Report Excess Emissions: In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. (condition 5.2 below). A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [F.A.C. Rule 62-210.700(6)]
- 5.2 Report Plant Operation Problems: If the owner or operator is temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the owner or operator shall immediately notify the Department. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the owner or operator from any liability for failure to comply with Department rules. [F.A.C. Rule 62-4.130]
- 5.3 Retain Records: All records required by this permit shall be kept by the owner or operator and made available for Department inspection for a minimum of five (5) years from the date of such records. [F.A.C. Rule 62-4.070(3)]
- 5.4 Compliance Test Reports: Compliance test reports shall be submitted to the Department of Environmental Protection, Southeast District Office, Air Compliance Section, as soon as practical, but no later than 45 days after the last sampling run of each test is completed. [F.A.C. Rule 62-297.310(8)(a) &(b)]

Test reports shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. Test reports, other than for an EPA or DEP Method 9 test, shall include the following information and other information as necessary to make a complete report required pursuant to F.A.C. Rule 297.310(8)(c):

- The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
- The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
- The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
- All measured and calculated data required to be determined by each applicable test procedure for each run.
- The detailed calculations for one run that relate the collected data to the calculated emission rate.
- The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.

- 5.5 Annual Report Required: On or before March 1 of each calendar year, a completed DEP Form 62-210.900(5), Annual Operations Report (AOR) Form for Air Pollutant Emitting Facility, shall be submitted to the Department of Environmental Protection, Southeast District Office, Air Program. **Included with this report shall be any additional reports, if any, required by this permit in Section III -- Emission Unit Specific Conditions.** [F.A.C. Rule 62-4.070(3) & 62-210.370(3)]
- 5.6 The permittee shall submit all compliance related notifications and reports required of this permit to the Department's Southeast District office.

Section III. Emissions Unit(s) and Conditions.

Subsection A. This section addresses the following emissions unit.

Emissions Unit Number	Emissions Unit Description
001	Municipal solid waste landfill with an enclosed flare

{Permitting note(s): This emissions 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(7)(b)71}

The following specific conditions apply to the emissions unit(s) listed above:

A.1 Essential Potential to Emit (PTE) Parameters

A.1.1 Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200(PTE), F.A.C.]

A.2 The following conditions from 40 CFR 60, Subpart WWW, apply to emission unit 001:

Section 60.752(b) Standards for air emissions from municipal solid waste landfills.

Each owner or operator shall either comply with condition (2) below or calculate an NMOC emission rate for the landfill using the procedures specified in section 60.754 of this permit. The NMOC emission rate shall be recalculated annually, except as provided in condition 60.757(b)(1)(ii). When a landfill is closed, and either never needed control or meets the conditions for control system removal specified in condition 60.752(b)(2)(v), a Title V operating permit is no longer required.

(1) If the calculated NMOC emission rate is less than 50 megagrams per year, the owner or operator shall:

(i) Submit an annual emission report to the Administrator, except as provided for in condition 60.757(b)(1)(ii); and

(ii) Recalculate the NMOC emission rate annually using the procedures specified in condition 60.754(a)(1) until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed.

(A) If the NMOC emission rate, upon recalculation required in paragraph (b)(1)(ii) of this section, is equal to or greater than 50 megagrams per year, the owner or operator shall install a collection and control system in compliance with condition (2) below.

(B) If the landfill is permanently closed, a closure notification shall be submitted to the Administrator as provided for in condition 60.757(d).

(2) If a NMOC emission rate for the landfill, using the procedures specified in section 60.754 of this permit, has not been calculated or the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the owner or operator shall:

(i) Submit a collection and control system design plan prepared by a professional engineer to the **Department of Environmental Protection, Southeast District Office, Air Program, on or before December 31, 1997.**

(A) The collection and control system as described in the plan shall meet the design requirements of condition 60.752(b)(2)(ii) of this permit.

(B) The collection and control system design plan shall include any alternatives to the operational standards, test methods or procedures, compliance measures, monitoring or recordkeeping requirements, or reporting provisions, of sections 60.753 through 60.758 of this permit, final by the owner or operator.

- (C) The collection and control system design plan shall either conform with specifications for active collection systems in section 60.759 of this permit or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to section 60.759.
- (D) The Administrator shall review the information submitted under conditions (2)(i) (A), (B) and (C) above and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems.
- (ii) Install a collection and control system **within 18 months** of the submittal of the design plan under condition (2)(i) above that effectively captures the gas generated within the landfill.
- (A) An active collection system shall:
- (1) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;
 - (2) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of:
 - (i) 5 years or more if active; or
 - (ii) 2 years or more if closed or at final grade;
 - (3) Collect gas at a sufficient extraction rate;
 - (4) Be designed to minimize off-site migration of subsurface gas.
- (B) A passive collection system shall:
- (1) Comply with the provisions specified in conditions (2)(ii)(A) (1), (2), and (4) above.
 - (2) Be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners shall be installed as required under 40 CFR 258.40.
- (iii) Route all the collected gas to a control system that complies with the requirements in either of the following conditions (2)(iii) (A), (B) or (C).
- (A) An open flare designed and operated in accordance with 40 CFR 60.18;
- (B) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test, required under 40 CFR Sec. 60.8 using the test methods specified in condition 60.754(d) of this permit.
- (1) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone.
 - (2) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in section 60.756;
- (C) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of condition (2)(iii) (A) or (B) above.
- (iv) Operate the collection and control device installed to comply with this permit in accordance with the provisions of sections 60.753, 60.755 and 60.756.
- (v) The collection and control system may be capped or removed provided that all the conditions of paragraphs (2)(v) (A), (B), and (C) below are met:
- (A) The landfill shall be no longer accepting solid waste and be permanently closed under the requirements of 40 CFR 258.60. A closure report shall be submitted to the Administrator as provided in condition 60.757(d) of this permit;
 - (B) The collection and control system shall have been in operation a minimum of 15 years; and
 - (C) Following the procedures specified in condition 60.754(b) of this permit, the calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.
- [Rule 62-204.800, F.A.C.; 40 CFR 60.752(b)]

Section 60.753 Operational standards for collection and control systems.

(a) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall 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:

- (1) 5 years or more if active; or
 - (2) 2 years or more if closed or at final grade.
- [Rule 62-204.800, F.A.C.; 40 CFR 60.753(a)]

(b) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall operate the collection system with negative pressure at each wellhead except under the following conditions:

- (1) 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 condition 60.757(f)(1);
 - (2) Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan;
 - (3) 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.
- [Rule 62-204.800, F.A.C.; 40 CFR 60.753(b)]

(c) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall 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.

- (1) The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by condition 60.752(b)(2)(i) above.
 - (2) Unless an alternative test method is established as allowed by condition 60.752(b)(2)(i) above, the oxygen shall be determined by an oxygen meter using Method 3A except that:
 - (i) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;
 - (ii) A data recorder is not required;
 - (iii) Only two calibration gases are required, a zero and span, and ambient air may be used as the span;
 - (iv) A calibration error check is not required;
 - (v) The allowable sample bias, zero drift, and calibration drift are ± 10 percent.
- [Rule 62-204.800, F.A.C.; 40 CFR 60.753(c)]

(d) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall 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 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.

[Rule 62-204.800, F.A.C.; 40 CFR 60.753(d)]

(e) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall operate the system such that all collected gases are vented to a control system designed and operated in compliance with condition 60.755(b)(2)(iii) above. 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.
[Rule 62-204.800, F.A.C.; 40 CFR 60.753(e)]

(f) Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of condition 60.752(b)(2)(ii) above shall operate the control or treatment system at all times when the collected gas is routed to the system.
[Rule 62-204.800, F.A.C.; 40 CFR 60.753(f)]

(g) If monitoring demonstrates that the operational requirement in conditions (b), (c), or (d) of this section are not met, corrective action shall be taken as specified in condition 60.755(a)(3) through (a)(5) or Sec. 60.755(c) of this permit. If corrective actions are taken as specified in section 60.755, the monitored exceedance is not a violation of the operational requirements in this section.
[Rule 62-204.800, F.A.C.; 40 CFR 60.753(g)]

Section 60.754 Test methods and procedures.

(a)(1) The landfill owner or operator shall calculate the NMOC emission rate using either the equation provided in condition (a)(1)(i) below or the equation provided in condition (a)(1)(ii) below. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_o , and 4,000 parts per million by volume as hexane for the C_{NMOC} .

(i) The following equation shall be used if the actual year-to-year solid waste acceptance rate is known.

$$M_{NMOC} = \sum_{i=1}^n 2kL_o M_i (e^{-kt_i}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

M_{NMOC} = Total NMOC emission rate from the landfill, megagrams per year
k = methane generation rate constant, year⁻¹
 L_o = methane generation potential, cubic meters per megagram solid waste
 M_i = mass of solid waste in the ith section, megagrams
 t_i = age of the ith section, years
 C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
 3.6×10^{-9} = conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if the documentation provisions of condition 60.758(d)(2) are followed.

(ii) The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown.

$$M_{NMOC} = 2L_o R (e^{-kc} - e^{-kt}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year
 L_o = methane generation potential, cubic meters per megagram solid waste
R = average annual acceptance rate, megagrams per year
k = methane generation rate constant, year⁻¹
t = age of landfill, years

C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
 c = time since closure, years. For active landfill $c = 0$ and $e^{-kc} = 1$
 3.6×10^{-9} = conversion factor

The mass of nondegradable solid waste may be subtracted from the average annual acceptance rate when calculating a value for R, if the documentation provisions of condition 60.758(d)(2) are followed.
[Rule 62-204.800, F.A.C.; 40 CFR 60.754(a)(1)]

- (2) Tier 1. The owner or operator shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.
- (i) If the NMOC emission rate calculated in condition (a)(1) of this section is less than 50 megagrams per year, then the landfill owner shall submit an emission rate report as provided in condition 60.757(b)(1), and shall recalculate the NMOC mass emission rate annually as required under condition 60.752(b)(1).
 - (ii) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the landfill owner shall either comply with condition 60.752(b)(2), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in specific condition (a)(3) below.
- [Rule 62-204.800, F.A.C.; 40 CFR 60.754(a)(2)]

- (3) Tier 2. The landfill owner or operator shall determine the NMOC concentration using the following sampling procedure. The landfill owner or operator shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste. The owner or operator shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25C or Method 18 of 40 CFR 60 Appendix A. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). If composite sampling is used, equal volumes shall be taken from each sample probe. If more than the required number of samples are taken, all samples shall be used in the analysis. The landfill owner or operator shall divide the NMOC concentration from Method 25C by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.
- (i) The landfill owner or operator shall recalculate the NMOC mass emission rate using the equations provided in condition (a)(1)(i) or (a)(1)(ii) of this section and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in specific condition (a)(1) of this section.
 - (ii) If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than 50 megagrams per year, then the landfill owner or operator shall either comply with condition 60.752(b)(2), or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in specific condition (a)(4) of this section.
 - (iii) If the resulting NMOC mass emission rate is less than 50 megagrams per year, the owner or operator shall submit a periodic estimate of the emission rate report as provided in condition 60.757(b)(1) and retest the site-specific NMOC concentration every 5 years using the methods specified in this section.
- [Rule 62-204.800, F.A.C.; 40 CFR 60.754(a)(3)]

- (4) Tier 3. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of 40 CFR 60 Appendix A. The landfill owner or operator shall estimate the NMOC mass emission rate using equations in condition (a)(1)(i) or (a)(1)(ii) of this section and using a site-specific methane generation rate constant k , and the site-specific NMOC concentration as determined in condition (a)(3) of this section instead of the default values provided in condition (a)(1) of this section. The landfill owner or operator shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year.
- (i) If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 megagrams per year, the owner or operator shall comply with condition 60.752(b)(2).

(ii) If the NMOC mass emission rate is less than 50 megagrams per year, then the owner or operator shall submit a periodic emission rate report as provided in condition 60.757(b)(1) and shall recalculate the NMOC mass emission rate annually, as provided in condition 60.757(b)(1) using the equations in condition (a)(1) of this section and using the site-specific methane generation rate constant and NMOC concentration obtained in condition (a)(3) of this section. The calculation of the methane generation rate constant is performed only once, and the value obtained is used in all subsequent annual NMOC emission rate calculations.

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(a)(4)]

(5) The owner or operator may use other methods to determine the NMOC concentration or a site-specific k as an alternative to the methods required in conditions (a)(3) and (a)(4) of this section if the method has been approved by the Administrator as provided in condition 60.752(b)(2)(i)(B).

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(a)(5)]

(b) After the installation of a collection and control system in compliance with section 60.755, the owner or operator shall calculate the NMOC emission rate for purposes of determining when the system can be removed as provided in condition 60.752(b)(2)(v), using the following equation:

$$M_{\text{NMOC}} = 1.89 \times 10^{-3} Q_{\text{LFG}} C_{\text{NMOC}}$$

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year

Q_{LFG} = flow rate of landfill gas, cubic meters per minute

C_{NMOC} = NMOC concentration, parts per million by volume as hexane

(1) The flow rate of landfill gas, Q_{LFG} , shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of Section 4 of Method 2E of 40 CFR 60 Appendix A.

(2) The average NMOC concentration, C_{NMOC} , shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of 40 CFR 60 Appendix A. If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The landfill owner or operator shall divide the NMOC concentration from Method 25C by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

(3) The owner or operator may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Administrator as provided in condition 60.752(b)(2)(i)(B).

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(b)]

(c) The owner or operator shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in 40 CFR 51.166 or 40 CFR 52.21 using AP-42 or other approved measurement procedures. If a collection system, which complies with the provisions in Sec. 60.752(b)(2) is already installed, the owner or operator shall estimate the NMOC emission rate using the procedures provided in condition (b) of this section.

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(c)]

(d) For the performance test required in condition 60.752(b)(2)(iii)(B), Method 25 or Method 18 of 40 CFR 60 Appendix A shall be used to determine compliance with 98 weight-percent efficiency or the 20 ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the Administrator as provided by condition 60.752(b)(2)(i)(B). If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The following equation shall be used to calculate efficiency:

$$\text{Control Efficiency} = (\text{NMOC}_{\text{in}} - \text{NMOC}_{\text{out}}) / (\text{NMOC}_{\text{in}})$$

where,

NMOC_{in} = mass of NMOC entering control device

NMOC_{out} = mass of NMOC exiting control device

[Rule 62-204.800, F.A.C.; 40 CFR 60.754(d)]

Section 60.755 Compliance provisions.

Except as provided in condition 60.752(b)(2)(i)(B), the specified methods in paragraphs (a)(1) through (a)(6) of this section shall be used to determine whether the gas collection system is in compliance with Sec. 60.752(b)(2)(ii).

(a)(1) For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with condition 60.752(b)(2)(ii)(A)(1), one of the following equations shall be used. The k and L_o kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42) or other site specific values demonstrated to be appropriate and approved by the Administrator. If k has been determined as specified in condition 60.754(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

(i) For sites with unknown year-to-year solid waste acceptance rate:

$$Q_m = 2L_oR(e^{-kc} - e^{-kt})$$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year

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

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, year⁻¹

t = age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years

c = time since closure, years (for an active landfill $c = 0$ and $e^{-kc} = 1$)

(ii) For sites with known year-to-year solid waste acceptance rate:

$$Q_M = \sum_{i=1}^n 2kL_o M_i (e^{-kt_i})$$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year

k = methane generation rate constant, year⁻¹

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

M_i = mass of solid waste in the i^{th} section, megagrams

t_i = age of the i^{th} section, years

(iii) If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in conditions (a)(1) (i) and (ii) of this section. If the landfill is still accepting waste, the actual measured flow data will not

equal the maximum expected gas generation rate, so calculations using the equations in conditions (a)(1)(i) or (ii) or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.
[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(1)]

(2) For the purposes of determining sufficient density of gas collectors for compliance with condition 60.752(b)(2)(ii)(A)(2), the owner or operator shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Administrator, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.
[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(2)]

(3) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with condition 60.752(b)(2)(ii)(A)(3), the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under condition 60.753(b). If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards.
[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(3)]

(4) Owners or operators are not required to install additional wells as required in specific condition (a)(3) of this section during the first 180 days after gas collection system start-up.
[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(4)]

(5) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator shall monitor each well monthly for temperature and nitrogen or oxygen as provided in condition 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards.
[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(5)]

(6) An owner or operator seeking to demonstrate compliance with condition 60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in section 60.759 of this permit shall provide information satisfactory to the Administrator as specified in condition 60.752(b)(2)(i)(C) demonstrating that off-site migration is being controlled.
[Rule 62-204.800, F.A.C.; 40 CFR 60.755(a)(6)]

(b) For purposes of compliance with condition 60.753(a), each owner or operator of a controlled landfill shall place each well or design component as specified in the approved design plan as provided in condition 60.752(b)(2)(i). Each well shall be installed within 60 days of the date in which the initial solid waste has been in place for a period of:

- (1) 5 years or more if active; or
 - (2) 2 years or more if closed or at final grade.
- [Rule 62-204.800, F.A.C.; 40 CFR 60.755(b)]

(c) The following procedures shall be used for compliance with the surface methane operational standard as provided in condition 60.753(d).

- (1) After installation of the collection system, the owner or operator shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a serpentine pattern spaced 30 meters apart (or a site-specific established spacing) for each collection area on a quarterly basis using an organic

vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in condition (d) of this section.

(2) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.

(3) Surface emission monitoring shall be performed in accordance with Section 4.3.1 of Method 21 of 40 CFR 60 Appendix A, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.

(4) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in conditions (c)(4) (i) through (v) of this section shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of condition 60.753(d).

(i) The location of each monitored exceedance shall be marked and the location recorded.

(ii) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be remonitored within 10 calendar days of detecting the exceedance.

(iii) If the remonitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the remonitoring shows a third exceedance for the same location, the action specified in condition (v) below shall be taken, and no further monitoring of that location is required until the action specified in condition (v) has been taken.

(iv) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in condition (ii) or (iii) above shall be re-monitored 1 month from the initial exceedance. If the 1-month remonitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month remonitoring shows an exceedance, the actions specified in condition (iii) or (v) shall be taken.

(v) For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Administrator for approval.

(5) The owner or operator shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(c)]

(d) Each owner or operator seeking to comply with the provisions in condition 60.755(c) above shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

(1) The portable analyzer shall meet the instrument specifications provided in Section 3 of 40 CFR 60 Appendix A Method 21, except that "methane" shall replace all references to VOC.

(2) The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.

(3) To meet the performance evaluation requirements in Section 3.1.3 of Method 21, the instrument evaluation procedures of Section 4.4 of Method 21 shall be used.

(4) The calibration procedures provided in Section 4.2 of Method 21 shall be followed immediately before commencing a surface monitoring survey.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(d)]

(e) The provisions of this permit 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.

[Rule 62-204.800, F.A.C.; 40 CFR 60.755(e)]

Section 60.756 Monitoring of operations.

(a) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to comply with condition 60.752(b)(2)(ii)(A) for an active gas collection system shall install a sampling port and a thermometer or other temperature measuring device at each wellhead and:

- (1) Measure the gauge pressure in the gas collection header on a monthly basis as provided in condition 60.755(a)(3); and
 - (2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in condition 60.755(a)(5); and
 - (3) Monitor temperature of the landfill gas on a monthly basis as provided in condition 60.755(a)(5).
- [Rule 62-204.800, F.A.C.; 40 CFR 60.756(a)]

(b) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to comply with condition 60.752(b)(2)(iii) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment.

- (1) A temperature monitoring device equipped with a continuous recorder and having an accuracy of ± 1 percent of the temperature being measured expressed in degrees Celsius or ± 0.5 °C, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.
 - (2) A gas flow rate measuring device that provides a measurement of gas flow to or bypass of the control device. 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.
- [Rule 62-204.800, F.A.C.; 40 CFR 60.756(b)]

(c) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to comply with condition 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.
- [Rule 62-204.800, F.A.C.; 40 CFR 60.756(c)]

(d) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to demonstrate compliance with condition 60.752(b)(2)(iii) using a device other than an open flare or an enclosed combustor shall provide information satisfactory to the Administrator as provided in condition 60.752(b)(2)(i)(B) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator shall review the information and either approve it, or request that additional information be submitted. The Administrator may specify additional appropriate monitoring procedures.

[Rule 62-204.800, F.A.C.; 40 CFR 60.756(d)]

(e) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to install a collection system that does not meet the specifications in Section 60.759 or seeking to monitor alternative parameters to those required by Section 60.753 through Section 60.756 shall provide information satisfactory to the Administrator

as provided in conditions 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 Administrator may specify additional appropriate monitoring procedures.

[Rule 62-204.800, F.A.C.; 40 CFR 60.756(e)]

(f) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to demonstrate compliance with condition 60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in condition 60.755(d). Any closed landfill that has no monitored exceedances of the operational standard in three 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.

[Rule 62-204.800, F.A.C.; 40 CFR 60.756(f)]

Section 60.757 Reporting requirements.

(a) An amended design capacity report shall be submitted to the Administrator providing notification of any increase in the design capacity of the landfill, whether the increase results from an increase in the permitted area or depth of the landfill, a change in the operating procedures, or any other means which results in an increase in the maximum design capacity of the landfill above 2.5 million megagrams or 2.5 million cubic meters. The amended design capacity report shall be submitted within 90 days of the issuance of an amended construction or operating permit, or the placement of waste in additional land, or the change in operating procedures which will result in an increase in maximum design capacity, whichever occurs first.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(a)]

(b) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator subject to the requirements of this subpart shall submit an annual NMOC emission rate report to the Administrator, except as provided for in condition (b)(1)(ii) or (b)(3) of this section. The Administrator may request such additional information as may be necessary to verify the reported NMOC emission rate.

(1) The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in condition 60.754(a) or (b), as applicable.

(i) NMOC emission rate reports shall be submitted annually, except as provided for in conditions (b)(1)(ii) and (b)(3) of this section.

(ii) If the estimated NMOC emission rate as reported in the annual report to the Administrator is less than 50 megagrams per year in each of the next 5 consecutive years, the owner or operator may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Administrator. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the Administrator. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

(2) The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.

(3) Each owner or operator subject to the requirements of this subpart is exempted from the requirements of conditions (b)(1) and (2) of this section, after the installation of a collection and control system in compliance with condition 60.752(b)(2), during such time as the collection and control system is in operation and in compliance with Section 60.753 and Section 60.755.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(b)]

(c) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator subject to the provisions of condition 60.752(b)(2)(i) shall submit a collection and control system design plan to the Administrator within 1 year of the first report, in which the emission rate exceeds 50 megagrams per year, except as follows:

(1) If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in condition 60.754(a)(3) and the resulting rate is less than 50 megagrams per year,

annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year.

(2) If the owner or operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in condition 60.754(a)(4), and the resulting NMOC emission rate is less than 50 Mg/yr, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of condition 60.754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Administrator within 1 year of the first calculated emission rate exceeding 50 megagrams per year.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(c)]

(d) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall submit a closure report to the Administrator within 30 days of waste acceptance cessation. The Administrator may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the Administrator, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4).

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(d)]

(e) Except as provided in condition 60.752(b)(2)(i)(B), 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 condition (d) of this section;

(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 condition 60.752(b)(2)(v) have been met.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(e)]

(f) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of a landfill seeking to comply with condition 60.752(b)(2) using an active collection system designed in accordance with condition 60.752(b)(2)(ii) shall submit to the Administrator annual reports of the recorded information in (f)(1) through (f)(6) below. The initial annual report shall be submitted within 180

days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40 CFR 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under condition 60.758(c).

(1) Value and length of time for exceedance of applicable parameters monitored under conditions 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 Section 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 condition 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 conditions (a)(3), (b), and (c)(4) of Section 60.755.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(f)]

(g) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator seeking to comply with condition 60.752(b)(2)(i) shall include the following information with the initial performance test report required under 40 CFR 60.8:

- (1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the final sites for the future collection system expansion;
- (2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;
- (3) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;
- (4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area; and
- (5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and

(6) The provisions for the control of off-site migration.

[Rule 62-204.800, F.A.C.; 40 CFR 60.757(g)]

Section 60.758 Recordkeeping requirements.

(a) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of an MSW landfill subject to the provisions of condition 60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the maximum design capacity, 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.

[Rule 62-204.800, F.A.C.; 40 CFR 60.758(a)]

(b) Except as provided in condition 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 conditions (b)(1) through (b)(4) of this section 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 this subpart seeks to demonstrate compliance with condition 60.752(b)(2)(ii):

(i) The maximum expected gas generation flow rate as calculated in condition 60.755(a)(1). The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Administrator.

(ii) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in condition 60.759(a)(1).

(2) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with condition 60.752(b)(2)(iii) through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity greater than 44 megawatts:

(i) The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test.

(ii) The percent reduction of NMOC determined as specified in condition 60.752(b)(2)(iii)(B) achieved by the control device.

(3) Where an owner or operator seeks to demonstrate compliance with condition 60.752(b)(2)(iii)(B)(1) through use of a boiler or process heater of any size: a description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing.

(4) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with condition 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.

[Rule 62-204.800, F.A.C.; 40 CFR 60.758(b)]

(c) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator of a controlled landfill subject to the provisions of this subpart shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in Section 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) The following constitute exceedances that shall be recorded and reported under condition 60.757(f):

(i) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28 °C below the average combustion temperature during the most recent performance test at which compliance with condition 60.752(b)(2)(iii) was determined.

(ii) For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under condition (b)(3)(i) of this section.

(2) Each owner or operator 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 Section 60.756.

(3) Each owner or operator who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with condition 60.752(b)(2)(iii) shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, or Federal regulatory requirements.)

(4) Each owner or operator seeking to comply with the provisions of this permit 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 condition 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.

[Rule 62-204.800, F.A.C.; 40 CFR 60.758(c)]

(d) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

(1) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under condition 60.755(b).

(2) Each owner or operator subject to the provisions of this subpart shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in condition 60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in condition 60.759(a)(3)(ii).

[Rule 62-204.800, F.A.C.; 40 CFR 60.758(d)]

(e) Except as provided in condition 60.752(b)(2)(i)(B), each owner or operator 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 condition 60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

[Rule 62-204.800, F.A.C.; 40 CFR 60.758(e)]

Section 60.759 Specifications for active collection systems.

(a) Each owner or operator seeking to comply with condition 60.752(b)(2)(i) shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the Administrator as provided in conditions 60.752(b)(2)(i)(C) and (D):

(1) The collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandibility, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, and resistance to the refuse decomposition heat.

(2) The sufficient density of gas collection devices determined in condition (a)(1) above shall address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior.

(3) The placement of gas collection devices determined in condition (a)(1) above shall control all gas producing areas, except as provided by conditions (a)(3)(i) and (a)(3)(ii) below.

(i) Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under condition 60.758(d). The documentation shall provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area, and shall be provided to the Administrator upon request.

(ii) Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the Administrator upon request. A separate NMOC emissions estimate shall be made for each section

final for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section shall be computed using the following equation:

$$Q_i = 2kL_oM_i(e^{-kt_i}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

Q_i = NMOC emission rate from the i^{th} section, megagrams per year

k = methane generation rate constant, year⁻¹

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

M_i = mass of the degradable solid waste in the i^{th} section, megagram

t_i = age of the solid waste in the i^{th} section, years

C_{NMOC} = concentration of nonmethane organic compounds, parts per million by volume

3.6×10^{-9} = conversion factor

(iii) The values for k , L_o , and C_{NMOC} determined in field testing shall be used, if field testing has been performed in determining the NMOC emission rate or the radii of influence. If field testing has not been performed, the default values for k , L_o and C_{NMOC} provided in condition 60.754(a)(1) shall be used. The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in condition (a)(3)(i) of this section.

[Rule 62-204.800, F.A.C.; 40 CFR 60.759(a)]

(b) Each owner or operator seeking to comply with condition 60.752(b)(2)(i)(A) shall construct the gas collection devices using the following equipment or procedures:

(1) The landfill gas extraction components shall be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: convey projected amounts of gases; withstand installation, static, and settlement

forces; and withstand planned overburden or traffic loads. The collection system shall extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration.

(2) Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.

(3) Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.

[Rule 62-204.800, F.A.C.; 40 CFR 60.759(b)]

(c) Each owner or operator seeking to comply with condition 60.752(b)(2)(i)(A) shall convey the landfill gas to a control system in compliance with condition 60.752(b)(2)(iii) through the collection header pipe(s). The gas mover equipment shall be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures:

(1) For existing collection systems, the flow data shall be used to project the maximum flow rate. If no flow data exists, the procedures in condition (c)(2) below shall be used.

(2) For new collection systems, the maximum flow rate shall be in accordance with condition 60.755(a)(1).

[Rule 62-204.800, F.A.C.; 40 CFR 60.759(c)]

A.3. The following conditions from 40 CFR 60.8, apply to emission unit 001 listed above:

Section 60.8 Performance tests.

(a) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator

(1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology,

(2) approves the use of an equivalent method,

(3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance,

(4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or

(5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

(c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

(d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present.

(e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

- (1) Sampling ports adequate for test methods applicable to such facility. This includes
 - (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and
 - (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.
- (2) Safe sampling platform(s).
- (3) Safe access to sampling platform(s).
- (4) Utilities for sampling and testing equipment.

(f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

A.4. The following conditions from 40 CFR 60.7, apply to emission unit 001 listed above:

60.7 Notification and record keeping.

(a) Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification as follows:

- (1) A notification of the date construction (or reconstruction as defined under § 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
- (2) A notification of the anticipated date of initial startup of an affected facility postmarked not more than 60 days nor less than 30 days prior to such date.
- (3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
- (4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in § 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and final emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.
- (5) A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with § 60.13(c). Notification shall be postmarked not less than 30 days prior to such date.
- (6) A notification of the anticipated date for conducting the opacity observations required by § 60.11(e)(1) of this part. The notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.
- (7) A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by § 60.8 in lieu of Method 9 observation data as allowed by § 60.11(e)(5) of this part. This notification shall be postmarked not less than 30 days prior to the date of the performance test.

A.5. The following conditions from 40 CFR 60.11(e), apply to emission unit 001 listed above:

60.11 Compliance with standards and maintenance requirements.

- (e)(1) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in § 60.8 unless one of the following conditions apply. If no performance test under § 60.8 is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under § 60.8, the source owner or operator shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30-day prior notification to the Administrator required in § 60.7(a)(6) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under § 60.8. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Reference Method 9 of appendix B of this part. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The owner or operator of an affected facility shall make available, upon request by the Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. Except as provided in paragraph (e)(5) of this section, the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in appendix B of this part, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.
- (2) Except as provided in paragraph (e)(3) of this section, the owner or operator of an affected facility to which an opacity standard in this part applies shall conduct opacity observations in accordance with paragraph (b) of this section, shall record the opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under § 60.8. The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.
- (3) The owner or operator of an affected facility to which an opacity standard in this part applies may request the Administrator to determine and to record the opacity of emissions from the affected facility during the initial performance test and at such times as may be required. The owner or operator of the affected facility shall report the opacity results. Any request to the Administrator to determine and to record the opacity of emissions from an affected facility shall be included in the notification required in § 60.7(a)(6). If, for some reason, the Administrator cannot determine and record the opacity of emissions from the affected facility during the performance test, then the provisions of paragraph (e)(1) of this section shall apply.
- (4) An owner or operator of an affected facility using a continuous opacity monitor (transmissometer) shall record the monitoring data produced during the initial performance test required by § 60.8 and shall furnish the Administrator a written report of the monitoring results along with Method 9 and § 60.8 performance test results.
- (5) An owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under § 60.8 in lieu of Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under § 60.8 is conducted. Once the owner or operator of an affected facility has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under § 60.8 until the owner or operator

notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under § 60.8 using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under § 60.8. The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in § 60.13(c) of this part, that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which Method 9 data indicates noncompliance, the Method 9 data will be used to determine opacity compliance.

(6) Upon receipt from an owner or operator of the written reports of the results of the performance tests required by § 60.8, the opacity observation results and observer certification required by § 60.11(e)(1), and the COMS results, if applicable, the Administrator will make a finding concerning compliance with opacity and other applicable standards. If COMS data results are used to comply with an opacity standard, only those results are required to be submitted along with the performance test results required by § 60.8. If the Administrator finds that an affected facility is in compliance with all applicable standards for which performance tests are conducted in accordance with § 60.8 of this part but during the time such performance tests are being conducted fails to meet any applicable opacity standard, he shall notify the owner or operator and advise him that he may petition the Administrator within 10 days of receipt of notification to make appropriate adjustment to the opacity standard for the affected facility.

(7) The Administrator will grant such a petition upon a demonstration by the owner or operator that the affected facility and associated air pollution control equipment was operated and maintained in a manner to minimize the opacity of emissions during the performance tests; that the performance tests were performed under the conditions established by the Administrator; and that the affected facility and associated air pollution.

(8) The Administrator will establish an opacity standard for the affected facility meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity standard at all times during which the source is meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity standard in the FEDERAL REGISTER.

A.6. The following conditions from 40 CFR 60.13(c), apply to emission unit 001 listed above:

60.13 Monitoring requirements.

(c) If the owner or operator of an affected facility elects to submit continuous opacity monitoring system (COMS) data for compliance with the opacity standard as provided under § 60.11(e)(5), he shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, appendix B, of this part before the performance test required under § 60.8 is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under § 60.8 or within 30 days thereafter in accordance with the applicable performance specification in appendix B of this part. The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.

(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under § 60.8 and as described in § 60.11(e)(5) shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in paragraph (c) of this section at least 10 days before the performance test required under § 60.8 is conducted.

(2) Except as provided in paragraph (c)(1) of this section, the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.

A.7. The following conditions from 40 CFR 60.14, apply to emission unit 001 listed above:

60.14 Modification.

- (a) Except as provided under paragraphs (e) and (f) of this section, any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.
- (b) Emission rate shall be expressed as kg/hr of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emission rate:
- (1) Emission factors as specified in the latest issue of "Compilation of Air Pollutant Emission Factors," EPA Publication No. AP-42, or other emission factors determined by the Administrator to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrate that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase.
 - (2) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in paragraph (b)(1) of this section does not demonstrate to the Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emission factors as referenced in paragraph (b)(1) of this section. When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in appendix C of this part shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.
- (c) The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of this part any other facility within that source.
- (d) [Reserved]
- (e) The following shall not, by themselves, be considered modifications under this part:
- (1) Maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of paragraph (c) of this section and § 60.15.
 - (2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.
 - (3) An increase in the hours of operation.
 - (4) Use of an alternative fuel or raw material if, prior to the date any standard under this part becomes applicable to that source type, as provided by § 60.1, the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the change. Conversion to coal required for energy considerations, as specified in section 111(a)(8) of the Act, shall not be considered a modification.
 - (5) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.
 - (6) The relocation or change in ownership of an existing facility.
- (f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions of this section.
- (g) Within 180 days of the completion of any physical or operational change subject to the control measures specified in paragraph (a) of this section, compliance with all applicable standards must be achieved.
- (h) No physical change, or change in the method of operation, at an existing electric utility steam generating unit shall be treated as a modification for the purposes of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the 5 years prior to the change.
- (i) Repowering projects that are awarded funding from the Department of Energy as permanent clean coal technology demonstration projects (or similar projects funded by EPA) are exempt from the requirements of this

section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the five years prior to the change.

- (j) (1) Repowering projects that qualify for an extension under section 409(b) of the Clean Air Act are exempt from the requirements of this section, provided that such change does not increase the actual hourly emissions of any pollutant regulated under this section above the actual hourly emissions achievable at that unit during the 5 years prior to the change.
- (2) This exemption shall not apply to any new unit that:
 - (i) Is designated as a replacement for an existing unit;
 - (ii) Qualifies under section 409(b) of the Clean Air Act for an extension of an emission limitation compliance date under section 405 of the Clean Air Act; and
 - (iii) Is located at a different site than the existing unit.
- (k) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project is exempt from the requirements of this section. A temporary clean coal control technology demonstration project, for the purposes of this section is a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.
- (l) The reactivation of a very clean coal-fired electric utility steam generating unit is exempt from the requirements of this section.

A.8. The following conditions from 40 CFR 60.15, apply to emission unit 001 listed above:

60.15 Reconstruction.

- (a) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.
- (b) "Reconstruction" means the replacement of components of an existing facility to such an extent that:
 - (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and
 - (2) It is technologically and economically feasible to meet the applicable standards set forth in this part.
- (c) "Fixed capital cost" means the capital needed to provide all the depreciable components.
- (d) If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, he shall notify the Administrator of the final replacements. The notice must be post-marked 60 days (or as soon as practicable) before construction of the replacements is commenced and must include the following information:
 - (1) Name and address of the owner or operator.
 - (2) The location of the existing facility.
 - (3) A brief description of the existing facility and the components which are to be replaced.
 - (4) A description of the existing air pollution control equipment and the final air pollution control equipment.
 - (5) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility.
 - (6) The estimated life of the existing facility after the replacements.
 - (7) A discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the final replacements.
- (e) The Administrator will determine, within 30 days of the receipt of the notice required by paragraph (d) of this section and any additional information he may reasonably require, whether the final replacement constitutes reconstruction.
- (f) The Administrator's determination under paragraph (e) shall be based on:
 - (1) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility;
 - (2) The estimated life of the facility after the replacements compared to the life of a comparable entirely new facility;

- (3) The extent to which the components being replaced cause or contribute to the emissions from the facility; and
 - (4) Any economic or technical limitations on compliance with applicable standards of performance which are inherent in the final replacements.
- (g) Individual subparts of this part may include specific provisions which refine and delimit the concept of reconstruction set forth in this section.

A.9. The following conditions from 40 CFR 60.18, apply to emission unit 001 listed above:

(Note: These conditions shall apply only if the facility chose to install an open flare)

60.18 General control device requirements.

- (a) **Introduction.** This section contains requirements for control devices used to comply with applicable subparts of parts 60 and 61. The requirements are placed here for administrative convenience and only apply to facilities covered by subparts referring to this section.
- (b) **Flares.** Paragraphs (c) through (f) apply to flares.
- (c) (1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
- (2) Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f).
- (3) Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (f).
- (4) (i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (b)(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 paragraph (f)(4), equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).
- (iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than the velocity, V_{max} , as determined by the method specified in paragraph (f)(5), and less than 122 m/sec (400 ft/sec) are allowed.
- (5) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, V_{max} , as determined by the method specified in paragraph (f)(6).
- (6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.
- (d) Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.
- (e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.
- (f) (1) Reference Method 22 shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.
- (2) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
- (3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

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

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 = Constant

$$1.740 \times 10^{-7} \left(\frac{1}{ppm} \right) \left(\frac{gmole}{scm} \right) \left(\frac{MJ}{kcal} \right)$$

where the standard temperature for (gmole/scm) 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 (Incorporated by reference as specified in § 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 (incorporated by reference as specified in § 60.17) if published values are not available or cannot be calculated.

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

(5) The maximum permitted velocity, V_{max} , for flares complying with paragraph (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 paragraph (f)(3).

(6) The maximum permitted velocity, V_{max} , 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 paragraph (f)(3).

A.10 Additional Compliance Monitoring and Testing Requirements.

A.10.1 The enclosed flare shall be continuously monitored for temperature and flow. The enclosed flare station shall be equipped with a temperature monitoring device with a recorder that continuously records the temperature of the flare chamber and a flow indicator that provides a record of gas flow to the enclosed flare at 15 second intervals. [F.A.C. Rule 62-4.070(3)]

{Permitting note: Table S-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

{Permitting note: Table S-2, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

A.11 Additional Record Keeping and Reporting Requirements

A.11.1 The permittee shall record and maintain the following information: [F.A.C. Rule 62-4.070(3) and request of permittee].

- a. The continuous temperature of the flare.
- b. The gas flow to the enclosed flare at 15 second intervals.
- c. Type and quantities of emissions generated from the enclosed flare.

The above records including the total gas combusted for the year shall be included with the annual operations report.

A.12 Semiannual Certification of Compliance Report: The permittee shall provide a written report to the Department of Environmental Protection, Southeast district office on a semiannual basis which certifies the current compliance status with respect to the conditions of this permit. The reports shall be completed and submitted to the Department on or before the deadline specified below. (see Appendix C)

<i>Reporting Period</i>	<i>Report Deadline</i>
1st Period: January through December of previous year	January 31 st.
2 nd Period: July through December of previous year, and January through June of current year	July 31 st.

The responsible official shall certify each report to be true, accurate, and complete based on the information submitted and belief formed after the reasonable inquiry.
[Rule 62-213.420(4) and 62-213.440(1)(b)3, F.A.C.]

Abbreviations and Acronyms:

°F: Degrees Fahrenheit	ISO: International Standards Organization
BACT: Best Available Control Technology	LAT: Latitude
CFR: Code of Federal Regulations	LONG: Longitude
DEP: State of Florida, Department of Environmental Protection	MMBtu: million British thermal units
DARM: Division of Air Resource Management	MW: Megawatt
EPA: United States Environmental Protection Agency	ORIS: Office of Regulatory Information Systems
F.A.C.: Florida Administrative Code	SOA: Specific Operating Agreement
F.S.: Florida Statutes	UTM: Universal Transverse Mercator

Citations:

The following examples illustrate the methods used in this permit to abbreviate and cite the references of rules, regulations, guidance memorandums, permit numbers, and ID numbers.

Code of Federal Regulations:

Example: **[40 CFR 60.334]**

Where 40 refers to Title 40, CFR refers to Code of Federal Regulations, 60 refers to Part 60, and 60.334 refers to Regulation 60.334

Florida Administrative Code (F.A.C.) Rules:

Example: **[Rule 62-213.205, F.A.C.] or [F.A.C. Rule 62-213.205]**

Where 62 refers to Title 62, 62-213 refers to Chapter 62-213, and 62-213.205 refers to Rule 62-213.205, F.A.C.

Guidance Memorandums from the Bureau of Air Regulation, Department of Environmental Protection:

Example: **[DARM-PER/GEN-12]** (Refers to a specific, numbered guidance memorandum.)

Identification Numbers:

Facility Identification (ID) Number:

Example: **Facility ID No.: 1119999**

Where 111 refers to the three digit county number code (111 is St. Lucie County) and 9999 refers to the four digit number assigned for the facility by DEP's database.

Permit Numbers:

Example: **1119999-002-AV or 1119999-001-AC**

Where AC refers to an Air Construction Permit, AV refers to a Title V Air Operation Permit, 1119999 refers to the facility ID number, and 001 or 002 refers to the three digit sequential project number assigned by DEP's permit tracking database

Example: **PSD-FL-999 or PA95-99 or AC56-999999**

Where PSD-FL refers to a Florida DEP Prevention of Significant Deterioration Permit, PA refers to a Florida Power Plant Siting Act Certification, and AC56-999999 refers to an older Air Construction Permit.

Appendix B, Applicable Definitions

The following definitions are applicable to this permit:

Active collection system means a gas collection system that uses gas mover equipment.

Active landfill means a landfill in which solid waste is being placed or a landfill that is planned to accept waste in the future.

Closed landfill means a landfill in which solid waste is no longer being placed, and in which no additional solid wastes will be placed without first filing a notification of modification as prescribed under Sec. 60.7(a)(4). Once a notification of modification has been filed, and additional solid waste is placed in the landfill, the landfill is no longer closed. A landfill is considered closed after meeting the criteria of Sec. 258.60 of this title.

Closure means that point in time when a landfill becomes a closed landfill.

Commercial solid waste means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.

Controlled landfill/ means any landfill at which collection and control systems are required under this subpart as a result of the nonmethane organic compounds emission rate. The landfill is considered controlled at the time either (1) A notification of intent to install a collection and control system or (2) A collection and control system design plan is submitted in compliance with Sec. 60.752(b)(2)(i).

Design capacity means the maximum amount of solid waste a landfill can accept, as specified in the construction or operating permit issued by the State, local, or Tribal agency responsible for regulating the landfill.

Disposal facility means all contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste.

Emission rate cutoff means the threshold annual emission rate to which a landfill compares its estimated emission rate to determine if control under the regulation is required.

Enclosed combustor means an enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. An enclosed flare is considered an enclosed combustor.

Flare means an open combustor without enclosure or shroud.

Gas mover equipment means the equipment (i.e., fan, blower, compressor) used to transport landfill gas through the header system.

Household waste means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including, but not limited to, single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).

Industrial solid waste means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of the Resource Conservation and Recovery Act, parts 264 and 265 of this title. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.

Interior well means any well or similar collection component located inside the perimeter of the landfill. A perimeter well located outside the landfilled waste is not an interior well.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile as those terms are defined under Sec. 257.2 of this title.

Lateral expansion means a horizontal expansion of the waste boundaries of an existing MSW landfill. A lateral expansion is not a modification unless it results in an increase in the design capacity of the landfill.

Municipal solid waste landfill or MSW landfill means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. An MSW landfill may also receive other types of RCRA Subtitle D wastes (Sec. 257.2 of this title) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of an MSW landfill may be separated by access roads. An MSW landfill may be publicly or privately owned. An MSW landfill may be a new MSW landfill, an existing MSW landfill, or a lateral expansion.

Appendix B, Applicable Definitions

Municipal solid waste landfill emissions or MSW landfill emissions means gas generated by the decomposition of organic waste deposited in an MSW landfill or derived from the evolution of organic compounds in the waste.

NMOC means nonmethane organic compounds, as measured according to the provisions of Sec. 60.754.

Nondegradable waste means any waste that does not decompose through chemical breakdown or microbiological activity. Examples are, but are not limited to, concrete, municipal waste combustor ash, and metals.

Passive collection system means a gas collection system that solely uses positive pressure within the landfill to move the gas rather than using gas mover equipment.

Sludge means any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility, exclusive of the treated effluent from a wastewater treatment plant.

Solid waste means any garbage, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C 2011 et seq.).

Sufficient density means any number, spacing, and combination of collection system components, including vertical wells, horizontal collectors, and surface collectors, necessary to maintain emission and migration control as determined by measures of performance set forth in this part.

Sufficient extraction rate means a rate sufficient to maintain a negative pressure at all wellheads in the collection system without causing air infiltration, including any wellheads connected to the system as a result of expansion or excess surface emissions, for the life of the blower.

Appendix C, Semiannual Certification of Compliance Report

Facility: Berman Road Landfill
 Permit Number: 0930104-002-AV

Reporting Period

<i>(Check one)</i>	<i>Reporting Period</i>	<i>Report Deadline</i>
_____	1st period: January through December of _____ (year)	January 31 st
_____	2 nd period: July through December of _____ (year), and January through June of _____ (year)	July 31 st

Compliance Statement (Please check one and submit the required information)

_____ This facility is in compliance with all conditions and requirements of the Title V Air Pollution Operation Permit. Please identify in an attachment to this report all methods used to demonstrate compliance with all conditions and requirements of this permit.

_____ This facility is in compliance with all conditions and requirements of the Title V Air Pollution Operation Permit, EXCEPT those identified in an attachment to this report. For each item of non-compliance, please include the following information:

1. Emission unit identification number;
2. Specific permit condition number;
3. Description of any deviations from this permit, including those attributable to upset conditions, including malfunctions;
4. The inclusive dates that the source was not in compliance;
5. Identification of the probable cause for non-compliance;
6. The actions taken to achieve compliance; and
7. The method used to demonstrate compliance.

Certification by Responsible Official

As the designated Responsible Official of this facility, I certify this report to be true, accurate, and complete based upon information and belief formed after reasonable inquiry.

Name: _____

Title: _____

Sign: _____

Date: _____

Appendix H
Permit History/ID Number Changes

USA Waste Services, Inc.
Berman Road Landfill

DRAFT Permit No.: 0930104-002-AV
Facility ID No.: 0930104

Permit History (for tracking purposes):

EU Number	Description	Permit Number	Issue Date	Expiration Date	Extension Date 1, 2	Revision Date
001	Enclosed Flare	0930104-001-AV	May 13, 1997	May 12-1998		
	Gas Collection System	SO 47-295975	November 19, 1996			

Notes:

1 AO permits were granted automatic extensions by Rule 62-210.300(2)(a)3.a., F.A.C., effective 03/21/96.

2 AC permits were granted automatic extensions by Rule 62-213.420(1)(a)4., F.A.C., effective 03/20/96.

(Rule 62-213.420(1)(b)2., F.A.C., effective 03/20/96, allows Title V Sources to operate under existing valid permits)

Permit History:

The facility was formerly owned by Okeechobee County and was purchased in January 1992 by Chambers Waste Systems Inc. now USA Waste Services, Inc. This landfill started accepting waste since June 1982. This facility is subject to 40 CFR 60 Subpart WWW regulations and is required to submit a Title V permit application.

Uncontrolled VOC emissions from the landfill are 340 Mg (374 tons) per year in 1996. The VOC emissions from the collection system will be vented to a 99% efficient enclosed flare. The expected controlled emissions for the flare will consist of 27.2 tons/year of NO₂ and 65 Tons/year of CO.

**Appendix S
Permit Summary Tables**

USA Waste Services, Inc.
Berman Road Landfill

DRAFT Permit No.: 0930104-002-AV
Facility ID No.: 0930104

Table S-1, Summary of Air Pollutant Emission Standards

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

Emission Unit	Brief Description
001	Municipal solid waste landfill with an enclosed flare

Pollutant	Fuel(s)	Hours per Year	Allowable Emissions		Equivalent Emissions ¹		Regulatory Citations	See Permit Condition(s)
			Standard(s)	lbs./hour	TPY	lbs./hour		
VOC	NA	8760	40 Subpart www	NA	NA	NA		

Notes:

¹ The "Equivalent Emissions" listed are for annual emissions fee purposes. [Rule 62-213.205, F.A.C.]
NA = not applicable

**Appendix S
Permit Summary Tables**

USA Waste Services, Inc.
Berman Road Landfill

DRAFT Permit No.: 0930104-002-AV
Facility ID No.: 0930104

Table S-2 Summary Of Compliance Reporting Requirements For Msw Landfills

Report or Action	Schedule	Reference
Initial Design Capacity Report	Submit report according to whichever of the following deadlines occurs first: (1) 90 days after receiving construction or operating permit, <u>OR</u> (2) 30 days after construction or reconstruction starts, <u>OR</u> (3) 30 days after initial acceptance of refuse.	§60.757(a)
Amended Design Capacity Report	If design capacity is increased to a value that equals or exceeds 2.5 million Mg, the landfill must submit an Amended Design Capacity Report. Submit report 90 days after receiving modified permit, using additional land, or increasing maximum design capacity of landfill, whichever occurs first.	§60.757(a)(3)
Annual OR Five-Year ^a NMOE Emission Rate Report (Tier 1)	Submit initial report 90 days after initial acceptance of refuse. May submit with Initial Design Capacity Report. Repeat either once a year <u>OR</u> once every 5 years.	§60.757(b)
Revised NMOE Emission Rate Report (Tier 2)	If Tier 1 analysis results in NMOE emissions ≥ 50 Mg/yr, a revised NMOE emission rate report using data gathered from Tier 2 analysis can be submitted within 180 days of the initial calculated exceedance.	§60.757(c)(1)
Revised NMOE Emission Rate Report (Tier 3)	If Tier 2 analysis results in NMOE emissions ≥ 50 Mg/yr, a revised NMOE Emission Rate Report using data gathered from Tier 3 analysis can be submitted within 1 year of the initial calculated exceedance.	§60.757(c)(2)

**Appendix S
Permit Summary Tables**

Table S-2. Summary Of Compliance Reporting Requirements For Msw Landfills (Continued)

Report or Action	Schedule	Reference
Collection and Control System Design Plan	Within 1 year after submitting NMOC Emission Rate Report with a value >50 Mg/yr. Plans must gain Agency approval prior to installation.	§60.757(c)
Emission Control System Start-up	Control system based on approved design will startup within 18 months after submitting design plan.	§60.752(b)(2)(ii)
Initial Control System Performance Test Report	Submit report within 180 days of emission collection and control system start-up per §60.8. Results can be included in the initial Annual Report.	§60.757(f) §60.757(g)
Annual Compliance Report	Submit initial report within 180 days of emission collection and control system start-up. Report once every 12 months.	§60.757(f) §60.757(g)
Landfill Closure Report	When landfill is no longer accepting refuse and the landfill is considered closed. Submit report within 30 days of refuse acceptance cessation.	§60.757(d)
Control Equipment Removal Report	Submit report within 30 days prior to removal or cessation of control system operations. Controls can be removed after meeting all of these criteria: (1) Landfill Closure Report has been submitted, (2) Control system was operated for at least 15 years, and (3) Three consecutive NMOC Emission Rate Reports with values <50 Mg/yr achieved.	§60.757(e)

a The owner/operator may elect to submit an estimate of the NMOC emission rate for the next 5 years in lieu of the annual report if the estimated NMOC emission rate is <50 Mg/yr in each of the 5 years.

Appendix S
Permit Summary Tables

Table S-3. Summary Of Monitoring Requirements For Msw Landfills

Equipment	Monitoring Action	Schedule	Reference
Gas Collection System	Monitor gauge pressure within each gas extraction well.	Monthly	§60.756(a)(1)
	A negative value indicates a well is operating with a sufficient gas extraction rate.		
	Monitor nitrogen concentration using Method 3C or oxygen concentration using Method 3A.	Monthly	§60.756(a)(2)
	Nitrogen concentration values <20 percent or oxygen concentration values < 5 percent indicate well extraction rates are not causing excessive air infiltration into the landfill.		
	Monitor LFG temperature in extraction well; should be <55°C (131°F), unless otherwise demonstrated that a higher temperature is appropriate.	Monthly	§60.756(a)(3)
	An elevated LFG temperature is an indicator of subsurface fires and aerobic conditions within the landfill.		
Gas Control System	Monitor methane concentration at the landfill surface.	Quarterly	§60.775(c)
	Values <500 ppm above background indicate well extraction rates are sufficient to minimize the amount of LFG seeping out of the landfill.	<u>OR</u>	and
	For an alternative gas collection system design, the owner/operator must submit appropriate monitoring requirements to the implementing agency for approval.	Skip Method ^a	§60.756(f)
	Monitor gas flow from collection system to the enclosed combustion device (unless bypass line valves are secured in a closed position with car-seal or lock-and-key type configuration).	To Be Determined	§60.756(e)
	This requirement identifies periods when gas flow has been diverted from the control device.	<u>OR</u> Monthly inspections of bypass line seals	§60.756(b)(2)

**Appendix S
Permit Summary Tables**

Table S-2. Summary Of Monitoring Requirements For Msw Landfills (Continued)

Equipment	Monitoring Action	Schedule	Reference
	<p>Monitor gas flow from collection system to open flare (unless bypass line valves are secured in a closed position with car-seal or lock-and-key type configuration).</p> <p>This requirement identifies periods when gas flow has been diverted from the control device.</p>	<p>At least once every 15 minutes</p> <p align="center"><u>OR</u></p> <p>Monthly inspections of bypass line seals</p>	<p>§60.756(c)(2)</p>
	<p>Monitor combustion temperature of the enclosed combustion device with a temperature monitoring device equipped with a continuous recorder. (Temperature monitoring is not required for a boiler or process heater >44 megawatts)</p> <p>This requirement identifies operational and performance status of control device.</p>	<p>Continuous</p>	<p>§60.756(b)(1)</p>
	<p>Monitor the continuous presence of a pilot flame or the flare flame for an open flare.</p> <p>This requirement confirms operational status of control device.</p>	<p>Continuous</p>	<p>§60.756(c)(1)</p>
<p>Gas Control System (continued)</p>	<p>For an alternative control device, the owner/operator must submit appropriate monitoring requirements to the implementing agency for approval.</p>	<p>To Be Determined</p>	<p>§60.756(d)</p>

a When monitoring of methane concentration for a closed landfill shows no exceedances for three consecutive quarterly monitoring periods, then monitoring can be "skipped" to annual monitoring. Any exceedance of the 500 ppm methane standard returns the landfill to quarterly monitoring.

**Appendix S
Permit Summary Tables**

Table S-3. Summary Of Recordkeeping Requirements For Msw Landfills

Operation	Recordkeeping Item	Reference
Landfill and Control System Design	<p>Current maximum design capacity, current amount of refuse-in-place, and year-by-year refuse accumulation rates</p> <p>Plot map showing each existing and planned well in the gas collection system. Provide unique identifying labels for each well.</p> <p>Installation date and location of all newly installed wells per §60.755(b).</p> <p>Description, location, amount, and placement date of all nondegradable refuse including asbestos and demolition refuse placed in landfill areas which are excluded from LFG collection and control.</p>	<p>§60.758(a)</p> <p>§60.758(d)</p> <p>§60.758(d)(1)</p> <p>§60.758(d)(2)</p>
Monitored Operating Parameters for Gas Collection and Control Systems	<ol style="list-style-type: none"> (1) Gauge pressure in each extraction well, (2) Nitrogen or oxygen concentration in extracted LFG. (3) Temperature of extracted LFG. (4) Methane concentrations along landfill surface. (5) Gas flow from collection system to the BDT control device (or seal bypass lines and inspect seals). (6) Combustion temperature of an enclosed combustion device or the continuous presence of a pilot flame for an (7) Operating parameters for alternative collection and control system designs, which are specified by the landfill and approved by the implementing agency. 	<p>§60.758(c)</p>
Measurements From Initial Performance Test	<p>Maximum expected gas generation flow rate</p> <p>Density of wells, horizontal collectors, surface collectors, or other gas extraction devices.</p>	<p>§60.758(b)(1)(i)</p> <p>§60.758(b)(1)(ii)</p>

**Appendix S
Permit Summary Tables**

Operation	Recordkeeping Item	Reference
	<p>For enclosed combustion devices (except for boilers or process heaters with a heat input ≥ 44 MW [150 MMBtu/hr]):</p> <p>(1) Average combustion temperature measured at least every 15 minutes and averaged over the performance test duration.</p> <p>(2) Percent reduction of NMOC's by the control device.</p> <p>For boilers/process heaters (of any size):</p> <p>Describe location where LFG is introduced into the boiler flame zone.</p> <p>For open flares:</p> <p>(1) Type of flare (steam-, air-, or non-assisted),</p> <p>(2) All visible emission readings,</p> <p>(3) Heat content determination,</p> <p>(4) Gas flow rate or bypass measurements,</p> <p>(5) Exit velocity determinations,</p> <p>(6) Continuous pilot flame or flare flame monitoring, and</p> <p>(7) All periods when pilot flame or flare flame is absent.</p>	<p>§60.758(b)(2)(i)</p> <p>§60.758(b)(2)(ii)</p> <p>§60.758(b)(3)</p> <p>§60.758(b)(4)</p>
<p>Gas Control System:</p> <p>Periods When Operating Parameters Exceeded Limits Set by Most Recent Performance Test</p>	<p>For enclosed combustion devices (except for boilers/process heaters with a heat input ≥ 44 MW [150 MMBtu/hr]):</p> <p>Records of all 3-hour periods in which the average combustion temperature was more than 280C (500F) below the average combustion temperature measured during the most recent performance test.</p> <p>For boilers/process heaters with a heat input ≥ 44 MW (150 MMBtu/hr): Document all periods of operation by</p>	<p>§60.758(c)(1)(f)</p> <p>§60.758(c)(3)</p>

**Appendix S
Permit Summary Tables**

Operation	Recordkeeping Item	Reference
	<p>recording parameters, such as steam use, fuel use, or other specified parameters required by other regulatory agencies.</p> <p>For boilers/process heaters: Document any changes to the location where collected LFG is introduced in the boiler flame zone.</p> <p>For an open flare: Record all pilot flame or flare flame monitoring data and all periods when pilot flame or flare flame was absent.</p> <p>Records of continuous 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.</p>	<p>§60.758(c)(1)(ii)</p> <p>§60.758(c)(4)</p> <p>§60.758(c)(2)</p>
<p>Gas Collection and Control System: Exceedances of operational standards</p>	<p>Record all values which exceed the operational standards specified in §60.753. Also include the operating value from the next monitoring period and the location of each exceedance:</p> <ol style="list-style-type: none"> (1) New well installation, (2) Pressure in each extraction well, (3) Nitrogen concentration or oxygen concentration in extracted LFG, (4) Temperature of extracted LFG, (5) Methane concentrations along landfill surface, (6) Collected LFG is routed to control device at all times, note periods when the collection system and/or control device were not operational. 	<p>§60.758(e)</p>

APPENDIX SS-1
STACK SAMPLING FACILITIES (version dated 10/07/96)

Stack Sampling Facilities Provided by the Owner of an Emissions Unit. This section describes the minimum requirements for stack sampling facilities that are necessary to sample point emissions units. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. Emissions units must provide these facilities at their expense. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.

(a) Permanent Test Facilities. The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent stack sampling facilities.

(b) Temporary Test Facilities. The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.

(c) Sampling Ports.

1. All sampling ports shall have a minimum inside diameter of 3 inches.
2. The ports shall be capable of being sealed when not in use.
3. The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.
4. For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.
5. On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.

(d) Work Platforms.

1. Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.
2. On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.
3. On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.
4. All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toeboard, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.

(e) Access to Work Platform.

1. Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.
2. Walkways over free-fall areas shall be equipped with safety rails and toeboards.

(f) Electrical Power.

1. A minimum of two 120-volt AC, 20-amp outlets shall be provided at the sampling platform within 20 feet of each sampling port.
2. If extension cords are used to provide the electrical power, they shall be kept on the plant's property and be available immediately upon request by sampling personnel.

(g) Sampling Equipment Support.

1. A three-quarter inch eyebolt and an angle bracket shall be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts.

a. The bracket shall be a standard 3 inch x 3 inch x one-quarter inch equal-legs bracket which is 1 and one-half inches wide. A hole that is one-half inch in diameter shall be drilled through the exact center of the horizontal portion of the bracket. The horizontal portion of the bracket shall be located 14 inches above the centerline of the sampling port.

b. A three-eighth inch bolt which protrudes 2 inches from the stack may be substituted for the required bracket. The bolt shall be located 15 and one-half inches above the centerline of the sampling port.

c. The three-quarter inch eyebolt shall be capable of supporting a 500 pound working load. For stacks that are less than 12 feet in diameter, the eyebolt shall be located 48 inches above the horizontal portion of the angle bracket. For stacks that are greater than or equal to 12 feet in diameter, the eyebolt shall be located 60 inches above the horizontal portion of the angle bracket. If the eyebolt is more than 120 inches above the platform, a length of chain shall be attached to it to bring the free end of the chain to within safe reach from the platform.

2. A complete monorail or dualrail arrangement may be substituted for the eyebolt and bracket.

3. When the sample ports are located in the top of a horizontal duct, a frame shall be provided above the port to allow the sample probe to be secured during the test.

[Rule 62-297.310(6), F.A.C.]

Appendix TV

The Title V Core Conditions, has been provided only to the applicant. The most recent version of these conditions may be obtained from the Department's Internet Web site at:

<http://www.dep.state.fl.us/air/>

If you do not have access to the Internet and would like a copy of Appendix TV, please contact Andrew Neita, Air Permitting Supervisor, Department of Environmental Protection, PO Box 15425, West Palm Beach, FL 33416, 516-681-6632. Copies of Appendix TV are available in printed form or electronic form as a Word 6.0 document.