Waste Connections of Osceola County, LLC

J.E.D. Solid Waste Management Facility

Facility ID No. 0970079
Osceola County

Title V Air Operation Permit Renewal

Permit No. 0970079-019-AV
(Renewal of Title V Air Operation Permit No. 0970079-015-AV)

Permitting Authority:
State of Florida
Department of Environmental Protection
Division of Air Resource Management
Permit Review Section
2600 Blair Stone Road
Mail Station #5505
Tallahassee, Florida 32399-2400

Telephone: (850) 717-9000
Email: DARM_Permitting@dep.state.fl.us

Compliance Authority:
State of Florida
Department of Environmental Protection
Compliance Assurance Program, Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

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Title V Air Operation Permit Renewal

Permit No. 0970079-019-AV

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Jeanette Nuñez
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PERMITTEE:
Waste Connections of Osceola County, LLC
1501 Omni Way
St. Cloud, Florida 34773

Permit No. 0970079-019-AV
J.E.D. Solid Waste Management Facility
Facility ID No. 0970079
Title V Air Operation Permit Renewal

The purpose of this permit is to renew the Title V air operation permit for the above referenced facility. The existing J.E.D. Solid Waste Management Facility is in Osceola County 1501 Omni Way, St. Cloud, Florida. UTM Coordinates are: Zone 17, 491.6 East and 3102.9 North. Latitude is: 28º03'6.5" North; and, Longitude is: 81º05'8.4" West.

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

Executed in Tallahassee, Florida.

0970079-019-AV Effective Date: January 14, 2025
Renewal Application Due Date: June 3, 2029
Expiration Date: January 14, 2030

David Lyle Read, P.E.

Digitally signed by David Read
Date: 2025.01.14 12:36:31 -05'00'

David Lyle Read, P.E., Environmental Administrator
Permit Review Section
Division of Air Resource Management

DLR/ivt

Subsection A. Facility Description.

Waste Connections of Osceola County, LLC (Waste Connections) owns and operates the J.E.D. Solid Waste Management Facility ("J.E.D. Landfill"), which is an active Class I landfill designed to include approximately 360 acres of lined disposal area, comprised of 23 cells with a design capacity 81.5 million tons. The landfill commenced construction in April 2003 and began receiving solid waste in January 2004. The yearly waste acceptance at the Class I landfill has averaged approximately 1,500,000 tons/year (1,360,800 megagram (Mg)/year). The facility also accepts asbestos-containing waste. Currently, the landfill contains four closed and ten active disposal cells.

The landfill is subject to 40 CFR 60 (NSPS) Subpart XXX, Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014, and 40 CFR 63 Subpart AAAA - National Emission Standards for Hazardous Air Pollutants (NESHAP): Municipal Solid Waste Landfills. Since the estimates of non-methane organic compounds (NMOC) emissions are greater than 34 megagrams per year, these federal regulations require the operation of a landfill gas (LFG) collection and control system (GCCS). The landfill has an active GCCS that has been installed in phases to collect generated landfill gas. Gas is conveyed to two (2) utility flares and/or six (6) Landfill Gas-to-Energy (LFGTE) engines. The flares are intended to operate as a failsafe backup system to control gaseous emissions when LFGTE plant is partially or completely down or there is excess landfill gas.

The facility also operates a hybrid leachate evaporator system, used to support in the management of collected leachate from the landfill, and one 135-kilowatt (kW)-stationary emergency generator which is fired by propane.

Subsection B. Summary of Emissions Units.

EU No.	Brief Description
Regulated Emissions Units	
001	MSW Class I Landfill with Gas Extraction - Cells 1-23
002	3,600 SCFM Open Candlestick Utility Flare, Flare #1
006	LFGTE Plant - Six (6) LFG-Fired Engines
007	4,800 SCFM Open Candlestick Utility Flare, Flare #2
008	SKAGEN F1200 Hybrid Leachate Evaporator System
009	Emergency Stationary Spark Ignition (SI) Reciprocating Internal Combustion Engine (RICE)

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

Subsection C. Applicable Regulations.

Based on the Title V air operation permit renewal application received August 26, 2024, this facility is a major source of hazardous air pollutants (HAP). The existing facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality. A summary of applicable regulations is shown in the following table.

Regulation	EU No(s).
Federal Rule Citations	
40 CFR 60, Subpart A, NSPS General Provisions	001, 002, 007, 006, 008
40 CFR 60, Subpart XXX, Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014	001, 002, 007, 008

Regulation	EU No(s).
40 CFR 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	006
40 CFR 61, Subpart A, NESHAP General Provisions	001
40 CFR 61, Subpart M, National Emissions Standard for Asbestos	001
40 CFR 63, Subpart A, NESHAP General Provisions	001, 002, 006, 007, 009
40 CFR 63, Subpart AAAA, NESHAP Municipal Solid Waste Facilities	001, 002, 007
40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants: Stationary Reciprocating Internal Combustion Engines	006, 009
State Rule Citations	
Rule 62-4, Florida Administrative Code (F.A.C.) (Permitting Requirements)	001, 002, 006, 007, 009
Rule 62-204, F.A.C. (Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference)	
Rule 62-210, F.A.C. (Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms)	
Rule 62-213, F.A.C. (Title V Air Operation Permits for Major Sources of Air Pollution)	
Rule 62-297, F.A.C. (Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures)	
Rule 62-212.400, F.A.C. (PSD)	001, 002, 006, 007

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

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

Emissions and Controls

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

FW3. Odor Remediation Plan. The facility shall be operated to control objectionable odors in accordance with subsection 62-296.320(2), F.A.C. After being notified by the Department that objectionable odors have been confirmed beyond the landfill property boundary, the permittee shall:

a. Immediately take steps to reduce the objectionable odors. Such steps may include applying or increasing initial cover, reducing the size of the working face, and ceasing operations in the areas where odors have been detected;
b. Submit to the Department for approval an odor remediation plan for the gas releases. The plan shall describe the nature and extent of the problem and the proposed long-term remedy. The remedy shall be initiated within 30 days of approval.
c. Implement a routine odor monitoring program to determine the timing and extent of any off-site odors, and to evaluate the effectiveness of the odor remediation plan.

[Rule 62-701.530(3)(b), F.A.C.]

FW4. General Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]

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

FW5. General Visible Emissions. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than 20% opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b), F.A.C.]

FW6. Unconfined Particulate Matter. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction; alteration; demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:

a. maintenance of paved areas, parking areas, and equipment yards as needed;
b. regular mowing of grass and care of vegetation;
c. covering open bodied trucks transporting materials for disposal in the landfill;
d. removal of earth or other material from paved roads;
e. use of water truck to wet unpaved roads;
f. limiting access to plant property by unnecessary vehicles; and
g. Enforcing speed limits on all roads inside the Facility.

[Rule 62-296.320(4)(c), F.A.C.; and, proposed by applicant in Title V air operation permit renewal application received August 26, 2024.]

Reports and Fees

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

FW7. Electronic Annual Operating Report and Title V Annual Emissions Fees. The information required by the Annual Operating Report for Air Pollutant Emitting Facility [Including Title V Source Emissions Fee Calculation] (DEP Form No. 62-210.900(5)) shall be submitted by April 1 of each year, for the previous calendar year, to the Department of Environmental Protection's (DEP) Division of Air Resource Management. Each Title V source shall submit the annual operating report using the DEP's Electronic Annual Operating Report (EAOR) software, unless the Title V source claims a technical or financial hardship by submitting DEP Form No. 62-210.900(5) to the DEP Division of Air Resource Management instead of using the reporting software. Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C. Each Title V source must pay between January 15 and April 1 of each year an annual emissions fee in an amount determined as set forth in subsection 62-213.205(1), F.A.C. The annual fee shall only apply to those regulated pollutants, except carbon monoxide and greenhouse gases, for which an allowable numeric emission-limiting standard is specified in the source's most recent construction permit or operation permit. Upon completing the required EAOR entries, the EAOR Title V Fee Invoice can be printed by the source showing which of the reported emissions are subject to the fee and the total Title V Annual Emissions Fee that is due. The submission of the annual Title V emissions fee payment is also due (postmarked) by April 1st of each year. A copy of the system-generated EAOR Title V Annual Emissions Fee Invoice and the indicated total fee shall be submitted to: **Major Air Pollution Source Annual Emissions Fee, Post Office Box 3070, Tallahassee, Florida 32315-3070.** Additional information is available by accessing the Title V Annual Emissions Fee On-line Information Center at the following Internet web site: http://www.dep.state.fl.us/air/emission/tvfee.htm. [Rules 62-210.370(3), 62-210.900 & 62-213.205, F.A.C.; and, §403.0872(11), Florida Statutes (2013)]

{Permitting Note: Resources to help you complete your AOR are available on the electronic AOR (EAOR) website at: http://www.dep.state.fl.us/air/emission/eaor. If you have questions or need assistance after reviewing the information posted on the EAOR website, please contact the Department by phone at (850) 717-9000 or email at eaor@dep.state.fl.us.}

{Permitting Note: The Title V Annual Emissions Fee form (DEP Form No. 62-213.900(1)) has been repealed. ***A separate Annual Emissions Fee form is no longer required to be submitted by March 1st each year.****}*

FW8. Annual Statement of Compliance. The permittee shall submit an annual statement of compliance to the compliance authority at the address shown on the cover of this permit and to the US. EPA at the address shown below within 60 days after the end of each calendar year during which the Title V air operation permit was effective (See also Appendix RR, Conditions RR1 and RR7.) The annual statement of compliance can be submitted to the U.S. EPA via the Compliance and Emissions Data Reporting Interface (CEDRI) on EPA's Central Data Exchange (CDX) at https://cdx.epa.gov/. [Rules 62-213.440(3)(a)2. & 3. and (b), F.A.C.]

U.S. Environmental Protection Agency, Region 4
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303
Attn: Air Enforcement Branch

FW9. Prevention of Accidental Releases (Section 112(r) of CAA). If, and when, the facility becomes subject to 112(r), the permittee shall:

a. Submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center. Any Risk Management Plans, original submittals, revisions or

updates to submittals, should be sent electronically through EPA's Central Data Exchange system at the following address: https://cdx.epa.gov. Information on electronically submitting risk management plans using the Central Data Exchange system is available at: http://www2.epa.gov/rmp. The RMP Reporting Center can be contacted at: RMP Reporting Center, Post Office Box 10162, Fairfax, VA 22038, Telephone: (703) 227-7650.

b. Submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.

[40 CFR 68]

FW10. Semi-Annual Reports. The permittee shall monitor compliance with the terms and conditions of this permit and shall submit reports at least every six months to the compliance office. Each semi-annual report shall cover the 6-month periods of January 1 – June 30 and July 1 – December 31. The reports shall be submitted by the 60th day following the end of each calendar half (i.e., March 1st and August 29th of every year). All instances of deviations from permit requirements (including conditions in the referenced Appendices) must be clearly identified in such reports, including reference to the specific requirement and the duration of such deviation. If there are no deviations during the reporting period, the report shall so indicate. Any semi-annual reporting requirements contained in applicable federal NSPS or NESHAP requirements may be submitted as part of this report. The submittal dates specified above shall replace the submittal dates specified in the federal rules. All additional reports submitted as part of this report should be clearly identified according to the specific federal requirement. All reports shall be accompanied by a certification by a responsible official, pursuant to subsection 62-213.420(4), F.A.C. [Rule 62-213.440(1)(b)3.a., F.A.C.; and, 40 CFR 60.19(d), 40 CFR 61.10(h) & 40 CFR 63.10(a)(5)]

(See also Conditions RR2. - RR4. of Appendix RR, Facility-wide Reporting Requirements, for additional reporting requirements related to deviations.)

{Permitting Note: EPA has clarified that, pursuant to 40 CFR 70.6(a)(3), the word "monitoring" is used in a broad sense and means monitoring (i.e., paying attention to) the compliance of the source with all emissions limitations, standards, and work practices specified in the permit.}

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

EU No.	Brief Description
001	MSW Class I Landfill with Gas Extraction - Cells 1-23

The existing JED Landfill is an active Class I Landfill with a municipal solid waste (MSW) design capacity greater than 2.5 million megagrams (Mg) by mass or 2.5 million cubic meters by volume. This landfill began receiving solid waste in January 2004. The landfill is designed to include approximately 360 acres of lined disposal area, comprised of 23 cells, with a design capacity 81.5 million tons.

Cells 1-10 of this landfill comprise the waste Phases I-III. Construction of cells 1-10 was authorized by Permit No. 0970079-001-AC at a capacity of 16.2 million tons. Expansion of the Class I Landfill into cells 11-23 was authorized by Permit No. 0970079-011-AC/PSD-FL-429 which allowed the capacity to increase. The footprint for cells 1-10 is approximately 123 acres and with the expansion into the additional cells 11-23, the total footprint of the Class I Landfill will be approximately 360 acres. The Class I landfill is permitted to receive asbestos-containing waste. At full build-out, the height of the landfill will be about 330 feet (NGVD).

Non-methane organic compound (NMOC) emissions from the JED landfill have been calculated to be greater than 34 Mg per year, therefore, a gas collection & control system (GCCS) is required. Collection and control of landfill gas emissions began in December 2008.

The facility operates one 3,600- standard cubic feet per minute (scfm) open flare (EU 002) used as the primary flare, which was installed in 2009. Permit No. 0970079-013-AC/PSD-FL-429A issued in March 2015, authorized installation of additional flares with a flaring capacity of 7,200-scfm and twelve (12) Caterpillar G3520C landfill gas-fired engines in Phase 1. Due to availability of landfill gas, only six (6) of the twelve engines (EU 006) and one (1) flare totaling 4,800 scfm capacity (EU 007) have been constructed.

{Permitting Note: This emissions unit is regulated under 40 CFR 60, Subpart A - General Provisions, adopted and incorporated by reference in Rule 62-204.800(8)(d), F.A.C.; 40 CFR 60, Subpart XXX, Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014, adopted and incorporated by reference in Rule 62-204.800(8)(b)77, F.A.C;40 CFR 61, Subpart M – National Emissions Standards for Asbestos, adopted and incorporated by reference in Rule 62-204.800(10)(b)8., F.A.C.; 40 CFR 63, Subpart A, adopted and incorporated by reference in Rule 62-204.800(11)(d)1.,F.A.C.; and 40 CFR 63, Subpart AAAA, adopted and incorporated by reference in Rule 62-204.800(11)(b)59., F.A.C.}

Essential Potential to Emit (PTE) Parameters

A.1. Hours of Operation. This emissions units may operate continuously (8,760 hours/year). [Rule 62-210.200(203), *Definitions - Potential to Emit (PTE)*, F.A.C.]

A.2. Permitted Capacity. The total solid waste disposal rate for the facility shall not exceed 3,526,403 tons per year. The solid waste disposed during Phase I through Phase III shall not exceed 16.2 million tons. [Rule 62-210.200(203), *Definitions - Potential to Emit (PTE)*, F.A.C.; and Permit No. 0970079-006-AC.]

A.3. Permitted Capacity. The existing J.E.D. Landfill may be expanded to an estimated new capacity of 81.5 million tons. [Rule 62-210.200(203), *Definitions - Potential to Emit (PTE)*, F.A.C.; and Permit No. 0970079-011-AC/PSD-FL-429.]

Control Technology

A.4. Landfill Gas Collection System. The permittee shall install, maintain and operate a collection and control system that captures the gas generated within the landfill and that meets the following requirements:

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:

(a) 5 years or more if active; or

(b) 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 paragraphs a(1), (2) and (3) 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. Link to 40 CFR 258.40

c. Route all the collected gas to a control system that complies with the requirements in either paragraph (1) (2) or (3) below.

(1) A non-enclosed flare designed and operated in accordance with 40 CFR 63.11(b) (and 40 CFR 60.18), except as noted in 40 CFR 63.1959(e) (and 40 CFR 60.764(e)) (see **Subsection B**.).

(2) A treatment system that processes the collected gas for subsequent sale or beneficial use such as fuel for combustion (see **Subsection C**.), production of vehicle fuel, production of high-Btu gas for pipeline injection, or use as a raw material in a chemical manufacturing process. Venting of treated landfill gas to the ambient air is not allowed. If the treated landfill gas cannot be routed for subsequent sale or beneficial use, then the treated landfill gas must be controlled according to paragraph (1).

(3) All emissions from any atmospheric vent from the gas treatment system are subject to the requirements of paragraph (1). Atmospheric vents located on the condensate storage tank are not part of the treatment system and are exempt from the requirements of paragraph (1).

d. Operate the collection and control systems in accordance with the provisions of 40 CFR 63.1958, 40 CFR 63.1960 and 40 CFR 63.1961.

e. The collection and control system may be capped or removed provided that all of the following conditions are met:

(1) The landfill is a closed landfill as defined in 40 CFR 63.1990 (and 40 CFR 60.761). A closure report shall be submitted to the Department as provided in 40 CFR 63.1981(f) (and 40 CFR 60.767(e)) (see Specific Condition **A.26.**);

(2) The collection and control systems shall have been in operation a minimum of 15 years, or the permittee demonstrates that the gas collection and control system will be unable to operate for 15 years due to declining gas flow; and

(3) Following the procedures specified in 40 CFR 63.1959(c) (and 40 CFR 60.764(b)) (see Specific Condition **A.10.**), the calculated NMOC produced by the landfill is less than 34 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.

[40 CFR 60.762(b)(2)(ii), (iii), (iv) & (v); and 40 CFR 63.1959(b)(2)(ii), (iii) and 63.1957(a), (b)]

A.5. Landfill Closure. When this landfill is closed, the permittee is no longer subject to the requirement to maintain a Title V Air operation permit under 40 CFR 70 or 71 for the landfill if the landfill is not otherwise subject to the requirements of 40 CFR 70 or 71 and if the permittee meets the conditions for control system removal specified in Specific Condition **A.4.e**. [40 CFR 60.762(d)]

A.6. No Longer Required to Comply with 40 CFR Part 63, Subpart AAAA. You are no longer required to comply with the requirements of 40 CFR 63, Subpart AAAA when your landfill meets the collection and control system removal criteria in Specific Condition **A.4.e.** [40 CFR 63.1950]

A.7. Specifications for Active Collection Systems. To comply with Specific Condition **A.4.**, the permittee shall:

a. 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 Department as provided in 40 CFR 60.767(c)(2) and (3) (and 40 CFR 60.767(c)(2) and (3)):

(1) The collection devices within the interior must be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues must be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, resistance to the refuse decomposition heat, and ability to isolate individual components or sections for repair or troubleshooting without shutting down entire collection system.

(2) The sufficient density of gas collection devices determined in paragraph a.(1) must 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 paragraph a.(1) must control all gas producing areas, except as provided by paragraphs (3)(a) and (3)(b).

(a) Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under 40 CFR 63.1983(d) (and 40 CFR 60.768(d)) (see Specific Condition **A.34.d.(2)**). 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 Department upon request.

(b) 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 must be documented and provided to the Department upon request. A separate NMOC emissions estimate must be made for each section proposed for exclusion, and the sum of all such sections must be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section must be computed using the following equation:

$$Q_i = 2\ k\ L_o\ M_i\ (e^{-kti})\ (C_{NMOC})\ (3.6 \times 10^{-9})$$

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

(c) The values for k and C_{NMOC} determined in field testing must be used if field testing has been performed in determining the NMOC emission rate or the radii of influence (this distance from the well center to a point in the landfill where the pressure gradient applied by the blower or

compressor approaches zero). If field testing has not been performed, the default values for k, L_o and C_{NMOC} provided in 40 CFR 1959(a)(1) (and 40 CFR 60.764(a)(1)) and or the alternative values from 40 CFR 1959(a)(5) (and 40 CFR 60.764(a)(5)) must 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 paragraph (a) above.

b. Construct the gas collection devices using the following equipment or procedures:
   (1) The landfill gas extraction components must 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 must extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors must be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations must be situated with regard to the need to prevent excessive air infiltration.
   (2) Vertical wells must be placed so as not to endanger underlying liners and must address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors must 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 must 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 must include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices must be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.
c. Convey the landfill gas to a control system in compliance with 40 CFR 60.762(b)(2)(iii) (and 40 CFR 60.762(b)(2)(iii)) (see Specific Condition **A.4.c.)** through the collection header pipe(s). The gas mover equipment must 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 must be used to project the maximum flow rate. If no flow data exists, the procedures in paragraph (2) shall be used.
   (2) For new collection systems, the maximum flow rate shall be in accordance with 40 CFR 63.1960(a)(1) (see Specific Condition **A.14.**).

[40 CFR 60.769(c) and 40 CFR 63.1962(c)]

Operational Standards

A.8. Operational Standards for Collection and Control Systems. The permittee must:

a. 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.
b. Operate the collection system with negative pressure at each wellhead except under the following conditions:

(1) A fire or increased well temperature. The permittee shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the semi-annual reports as provided in 40 CFR 63.1981(h) (see Specific Condition **A.28.**);

(2) Use of a geomembrane or synthetic cover. The permittee shall develop acceptable pressure limits in the design plan;

(3) A decommissioned well. A well may experience a static positive pressure after shutdown to accommodate for declining flows. All design changes must be approved by the Department as specified in 40 CFR 63.1981(d)(2).

c. Operate each interior wellhead in the collection system with a landfill gas temperature less than 62.8°C (145°F). The permittee may establish a higher operating temperature value at a particular well. A higher operating value demonstration must be submitted to the Department for approval and must include supporting data demonstrating that the elevated parameter neither causes fires nor significantly inhibits anaerobic decomposition by killing methanogens. The demonstration must satisfy both criteria in order to be approved (*i.e.,* neither causing fires nor killing methanogens is acceptable).

{Permitting Note: Some of the landfill wellheads are approved to operate at wellhead temperatures of 73.9°C (165°F) or less in accordance with previously issued ASPs. See Appendix G for a list of these wellheads.}

d.

(1) Operate the collection system so that the methane concentration is less than 500 parts per million (ppm) above background at the surface of the landfill. To determine if this level is exceeded, the permittee must conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at no more than 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 permittee may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan must 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.

(2)

(a) Conduct surface testing using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in 40 CFR 63.1960(d).

(b) Conduct surface testing at all cover penetrations. Thus, the permittee must monitor any cover penetrations that are within an area of the landfill where waste has been placed and a gas collection system is required.

(c) Determine the latitude and longitude coordinates of each exceedance using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.

e. Operate the LFG collection system in accordance to 40 CFR 63.1955(c) such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR 63.1959(b)(2)(iii) (40 CFR 60.762(b)(2)(iii)) (see Specific Condition **A.4.**). In the event the collection or control system is not operating:

(1) The gas mover system must be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere must be closed within 1 hour of the collection or control system not operating; and,

(2) Efforts to repair the collection or control system must be initiated and completed in a manner such that downtime is kept to a minimum, and the collection and control system must be returned to operation.

f. Operate the control system at all times when the collected gas is routed to the system.

g. If monitoring demonstrates that the operational requirement in conditions b., c., or d. of this condition are not met, corrective action shall be taken as specified in 40 CFR 63.1960(a)(3) and (5) or (c) (see Specific Condition **A.14.** or **A.15.**). If corrective actions are taken as specified in 40 CFR 63.1960, the monitored exceedance is not a violation of the operational requirements in this condition.

[40 CFR 63.1958]

A.9. Operational Standards for Active Asbestos Waste Disposal. Because this facility receives asbestos-containing waste material from: asbestos mills; manufacturing, fabricating, demolition, renovation, and spraying operations; and operations that convert asbestos-containing waste material into non-asbestos (asbestos-free) material, the permittee shall meet the following requirements:

a. Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of paragraph c. or d. of this condition must be met.

b. Unless a natural barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as follows, or the requirements of paragraph c.(1) of this condition must be met.

(1) Warning signs must be displayed at all entrances and at intervals of 100 m (330 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material is deposited. The warning signs must:

(a) Be posted in such a manner and location that a person can easily read the legend; and

(b) Conform to the requirements of 51 cm × 36 cm (20 inch×14 inch) upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and

[Note: 29 CFR 1910.145(d)(4) *Caution signs*. The standard color of the background shall be yellow; and the panel, black with yellow letters. Any letters used against the yellow background shall be black. The colors shall be those of opaque glossy samples as specified in Table 1 of ANSI Z53.1-1967 or Table 1 of ANSI Z535.1-2006(R2011), incorporated by reference in 29 CFR 1910.6. Link to 29 CFR 1910.145]

(c) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend	Notation
Asbestos Waste Disposal Site	2.5 cm (1 inch) Sans Serif, Gothic or Block.
Do Not Create Dust	1.9 cm (3/4 inch) Sans Serif, Gothic or Block.
Breathing Asbestos is Hazardous to Your Health	14 Point Gothic.

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

(2) The perimeter of the disposal site must be fenced in a manner adequate to deter access by the general public.

(3) Upon request and supply of appropriate information, the Department will determine whether a fence or a natural barrier adequately deters access by the general public.

c. Rather than meet the no visible emission requirement of paragraph a. of this condition, at the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material that has been deposited at the site during the operating day or previous 24-hour period shall:

(1) Be covered with at least 15 centimeters (6 inches) of compacted non-asbestos-containing material, or

(2) Be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the Department. For purposes of this paragraph, any used, spent, or other waste oil is not considered a dust suppression agent.

d. Rather than meet the no visible emission requirement of paragraph a. of this condition, use an alternative emissions control method that has received prior written approval by the Department. As prescribed by 40 CFR 61.149(c)(2), to obtain approval for an alternative method, a written application must be submitted to the Department demonstrating that the following criteria are met:

(1) The alternative method will control asbestos emissions equivalent to currently required methods.

(2) The suitability of the alternative method for the intended application.

(3) The alternative method will not violate other regulations.

(4) The alternative method will not result in increased water pollution, land pollution, or occupational hazards.

e. For all asbestos-containing waste material received, the permittee shall:

(1) Maintain waste shipment records, using a form similar to that shown in Figure 4 of 40 CFR 61.149 [Link to 40 CFR 61.149], and include the following information:

(a) The name, address, and telephone number of the waste generator.

(b) The name, address, and telephone number of the transporter(s).

(c) The quantity of the asbestos-containing waste material in cubic meters (cubic yards).

(d) The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report.

(e) The date of the receipt.

(2) As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator.

(3) Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it and submit a copy of the waste shipment record along with the report.

(4) Retain a copy of all records and reports required by this paragraph for at least five years.

f. Maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.

g. Upon closure, comply with all the provisions of 40 CFR 61.151.

h. Submit to the Department, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities.

i. Furnish upon request and make available during normal business hours for inspection by the Department, all records required under this permit.

j. Notify the Department in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Department at least ten working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:

(1) Scheduled starting and completion dates.

(2) Reason for disturbing the waste.

(3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Department may require changes in the emission control procedures to be used.

(4) Location of any temporary storage site and the final disposal site.

[29 CFR 1910.145(d)(4), 40 CFR 61.149(c)(2), and 40 CFR 61.154]

Monitoring of Operations

A.10. Removal of Collection System. The permittee shall calculate the NMOC emission rate for purposes of determining when the system can be capped, removed, or decommissioned as provided in 40 CFR 63.1957(b)(3) (and 40 CFR 60.762(b)(2)(v)) (see Specific Condition **A.4.e.**), using the following equation:

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

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
$1.89 \times 10{-}3$ = Conversion factor.

a. The flow rate of landfill gas, Q_{LFG}, must be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control system using a gas flow measuring device calibrated according to the provisions of section 10 of EPA Method 2E of 40 CFR 60 Appendix A. Link to 40 CFR 60 Appendices

b. The average NMOC concentration, C_{NMOC}, must 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 EPA Method 25 or Method 25C of 40 CFR 60 Appendix A. The sample location on the common header pipe must be before any condensate removal or other gas refining units. The permittee must divide the NMOC concentration from EPA Method 25 or Method 25C of 40 CFR 60 Appendix A, by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

c. The permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Department. Within 60 days after the date of completing this performance test, the permittee must submit the results of the performance test, including any associated fuel analyses, according to 40 CFR 63.1981(l)(1) (and 40 CFR 60.767(i)(1)).

[40 CFR 60.764(b) and 40 CFR 63.1959(c)]

A.11. Wellhead Monitoring. The permittee shall maintain and operate a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and:

a. Measure the gauge pressure in the gas collection header on a monthly basis as provided in 40 CFR 63.1960(a)(3); (see Specific Condition **A.14.**); and

b. Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as follows:
   (1) The nitrogen level must be determined using Method 3C, unless an alternative test method is established as allowed by 40 CFR 63.1981(d)(2).
   (2) Unless an alternative test method is established as allowed by 40 CFR 63.1981(d)(2), the oxygen level must be determined using EPA Method 3A, 3C of 40 CFR 60, Appendix A-2, or ASTM D6522-11 (incorporated by reference in 40 CFR 63.14). Determine the oxygen level by an oxygen meter using EPA Method 3A, 3C of 40 CFR 60, Appendix A-2, or ASTM D6522-11 (if sample location is prior to combustion) except that:
      (a) The span must be set between 10 and 12 percent oxygen;
      (b) A data recorder is not required;
      (c) Only two calibration gases are required, a zero and span;
      (d) A calibration error check is not required;
      (e) The allowable sample bias, zero drift, and calibration drift are ±10 percent.
   (3) A portable gas composition analyzer may be used to monitor the oxygen levels provided:
      (a) The analyzer is calibrated; and
      (b) The analyzer meets all quality assurance and quality control requirements for EPA Method 3A of 40 CFR 60, Appendix A-2 or ASTM D6522-11 (incorporated by reference in 40 CFR 63.14).

c. Monitor temperature of the landfill gas on a monthly basis as provided in 40 CFR 63.1960(a)(4) (see Specific Condition **A.14.**). The temperature measuring device must be calibrated annually using the procedure in 40 CFR 60, Appendix A-1, Method 2, Section 10.3.

d. Unless a higher operating temperature value has been approved by the Department, the permittee must initiate enhanced monitoring at each well with a measurement of landfill gas temperature greater than 62.8°C (145°F) as follows:
   (1) Visual observations for subsurface oxidation events (smoke, smoldering ash, damage to well) within the radius of influence of the well.
   (2) Monitor oxygen concentration as provided in paragraph **b(2)** of this condition.
   (3) Monitor temperature of the landfill gas at the wellhead as provided in paragraph **c**. of this condition.
   (4) Monitor temperature of the landfill gas every 10 vertical feet of the well as provided in paragraph e of this condition.
   (5) Monitor the methane concentration with a methane meter using EPA Method 3C or EPA Method 18 of 40 CFR 60, Appendix A-6, or a portable gas composition analyzer to monitor the methane levels provided that the analyzer is calibrated and the analyzer meets all quality assurance and quality control requirements for EPA Method 3C or EPA Method 18.
   (6) Monitor and determine carbon monoxide concentrations, as follows:
      (a) Collect the sample from the wellhead sampling port in a passivated canister or multi-layer foil gas sampling bag (such as the Cali-5-Bond Bag) and analyze that sample using EPA Method 10 of 40 CFR 60, appendix A-4, or an equivalent method with a detection limit of at least 100 ppmv of carbon monoxide in high concentrations of methane; or
      (b) Collect and analyze the sample from the wellhead using EPA Method 10 to measure carbon monoxide concentrations.
      (c) When sampling directly from the wellhead, you must sample for 5 minutes plus twice the response time of the analyzer. These values must be recorded. The five 1-minute averages are then averaged to give you the carbon monoxide reading at the wellhead.

(d) When collecting samples in a passivated canister or multi-layer foil sampling bag, you must sample for the period of time needed to assure that enough sample is collected to provide five (5) consecutive, 1-minute samples during the analysis of the canister or bag contents, but no less than 5 minutes plus twice the response time of the analyzer. The five (5) consecutive, 1-minute averages are then averaged together to give you a carbon monoxide value from the wellhead.

(7) The enhanced monitoring described in paragraph d must begin 7 calendar days after the first measurement of landfill gas temperature greater than 62.8°C (145°F); and

(8) The enhanced monitoring described in paragraph d must be conducted on a weekly basis. If four consecutive weekly carbon monoxide readings are under 100 ppmv, then enhanced monitoring may be decreased to monthly. However, if carbon monoxide readings exceed 100 ppmv again, the landfill must return to weekly monitoring.

(9) The enhanced monitoring described in paragraph d can be stopped once a higher operating value is approved, at which time the monitoring provisions issued with the higher operating value should be followed, or once the measurement of landfill gas temperature at the wellhead is less than or equal to 62.8°C (145°F).

e. For each wellhead with a measurement of landfill gas temperature greater than or equal to 73.9°C (165° F), annually monitor temperature of the landfill gas every 10 vertical feet of the well. This temperature can be monitored either with a removable thermometer, or using temporary or permanent thermocouples installed in the well.

[40 CFR 63.1961(a)]

A.12. LFG Collection System Alternative Parameters. Each owner or operator seeking to install a collection system that does not meet the specifications in 40 CFR 63.1962 (see Specific Condition **A.7.**) or seeking to monitor alternative parameters to those required by 40 CFR 63.1958 through 63.1961 (see Specific Conditions **A.8., A.10., A.11., A.14** through **A.17.)** must provide information satisfactory to the Department as provided in 40 CFR 63.1981(d)(2) and (3) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Department may specify additional appropriate monitoring procedures. [40 CFR 63.1961(e)]

A.13. Applicability of Monitoring Requirements. The monitoring requirements of 40 CFR 63. 1961 (a)-(d) and (g) apply at all times the affected source is operating, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The permittee is required to complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable. [40 CFR 63.1961(h)]

Compliance Provisions

A.14. Gas Collection System. Except as provided in 40 CFR 63.1981(d)(2), the specified methods in paragraphs a. through f. must be used to determine whether the gas collection system is in compliance with 40 CFR 63.1959(b)(2)(ii) (and 40 CFR 60.762(b)(2)(ii)) (see Specific Condition **A.4.**).

a. For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with 40 CFR 63.1959(b)(2)(ii)(C)(1) (see Specific Condition **A.4.a(1)**), one of the following equations must be used. The permittee may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Department. The methane generation rate constant (k) and methane generation potential (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 Department. If k has been determined as specified in 40 CFR

63.1959(a)(4) (*i.e.*, Tier 3), the value of k determined from the test must be used. A value of no more than 15 years must 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.

(1) 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 permittee 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 $e^{-kc} = 1$)

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

$$Q_M = \sum_{i=1}^{n} 2\,k\,L_o\,M_i\left(e^{-kt_i}\right)$$

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

(3) 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 paragraphs a.(1) and a.(2). 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 paragraphs a.(1) or a.(2) or other methods must be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

b. For the purposes of determining sufficient density of gas collectors for compliance with 40 CFR 63.1959(b)(2)(ii)(B)(2) (see Specific Condition **A.4.a(2)**), the permittee must design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Department, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

c. For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40 CFR 63.1959(b)(2)(ii)(B)(3) (see Specific Condition **A.4.a(3)**), the permittee must measure gauge pressure in the gas collection header applied to each individual well, monthly. Any attempted corrective measure must not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Department for approval. If a positive pressure exists, action must be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under 40 CFR 63.1958(b) (see Specific Condition **A.8.b**).

(1) If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement of positive pressure, the permittee must conduct a root cause analysis and correct the exceedance as soon as practicable, but no later than 60 days after positive pressure was first

measured. The permittee must keep records according to 40 CFR 63.1983(e)(3) (Specific Condition **A.34.e.(3)**).

(2) If corrective actions cannot be fully implemented within 60 days following the positive pressure measurement for which the root cause analysis was required, the permittee must also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the positive pressure measurement. The permittee must submit the items listed in 40 CFR 63.1981(h)(7) (see Specific Condition **A.28.g.**) as part of the next semi-annual report. The permittee must keep records according to 40 CFR 63.1983(e)(4) (see Specific Condition **A.34.e.(4)**).

(3) If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the permittee must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Department, according to 40 CFR 63.1981(j) (see Specific Conditions **A.28.g.** and **A.29.**). The permittee must keep records according to 40 CFR 63.1983(e)(5) (see Specific Condition **A.34.e.(5)**).

d. The permittee must monitor each well monthly for temperature for the purpose of identifying whether excess air infiltration exists. If a well exceeds the operating parameter for temperature as provided in 40 CFR 63.1958(c)(1) (Specific Condition **A.8.c.**), action must be initiated to correct the exceedance within 5 calendar days. Any attempted corrective measure must not cause exceedances of other operational or performance standards.

(1) If a landfill gas temperature less than 62.8˚C (145˚F) cannot be achieved within 15 calendar days of the first measurement of landfill gas temperature greater than 62.8˚C (145˚F), the permittee must conduct a root cause analysis and correct the exceedance as soon as practicable, but no later than 60 days after a landfill gas temperature greater than 62.8˚C (145˚F) was first measured. The permittee must keep records according to 40 CFR 63.1983(e)(3) (see Specific Condition **A.34.e.(3)**).

(2) If corrective actions cannot be fully implemented within 60 days following the temperature measurement for which the root cause analysis was required, the permittee must also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the measurement of landfill gas temperature greater than 62.8˚C (145˚F). The permittee must submit the items listed in 40 CFR 63.1981(h)(7) (see Specific Condition **A.28.g.**) as part of the next semi-annual report. The permittee must keep records according to 40 CFR 63.1983(e)(4) (see Specific Condition **A.34.e.(4)**).

(3) If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the permittee must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Department, according to 40 CFR 63.1981(h)(7) and (j) (see Specific Conditions **A.28.g.** and **A.29.**). The permittee must keep records according to 40 CFR 63.1983(e)(5) (see Specific Condition **A.34.e.(5)**).

(4) If a landfill gas temperature measured at either the wellhead or at any point in the well is greater than or equal to 76.7˚C (170˚F) and the carbon monoxide concentration measured, according to the procedures in 40 CFR 63.1961(a)(5)(vi) is greater than or equal to 1,000 ppmv the corrective action(s) for the wellhead temperature standard (62.8˚C or 145˚F) must be completed within 15 days.

e. An permittee seeking to demonstrate compliance with 40 CFR 63.1959(b)(2)(ii)(B)(*4*) (see Specific Condition **A.4.a(4)**) through the use of a collection system not conforming to the specifications provided in 40 CFR 63.1962 (see Specific Condition **A.7.**) must provide information satisfactory to the Department as specified in 40 CFR 63.1981(d)(3) demonstrating that off-site migration is being controlled.

[40 CFR 63.1960(a)]

A.15. Surface Methane Monitoring. The following procedures must be used for compliance with the surface methane operational standard as provided in 40 CFR 63.1958(d) (see Specific Condition **A.8.d.**).

a. After installation and startup of the gas collection system, the permittee must monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30-meter intervals (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 40 CFR 63.1960(d) (see Specific Condition **A.16.**).

b. The background concentration must 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.

c. Surface emission monitoring shall be performed in accordance with Section 8.3.1 of Method 21 of Appendix A of 40 CFR 60, except that the probe inlet must be placed within 5 to 10 centimeters of the ground. Monitoring must be performed during typical meteorological conditions.

d. Any reading of 500 parts per million or more above background at any location must be recorded as a monitored exceedance, and the actions specified in paragraphs (1) through (5), below, must be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of 40 CFR 63.1958(d) (see Specific Condition **A.8.d.**).

(1) The location of each monitored exceedance must be marked and the location and concentration recorded. The location must be recorded using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.

(2) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance must be made and the location must be re-monitored within 10 days of detecting the exceedance.

(3) If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken, and the location must be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in paragraph (5), below, must be taken, and no further monitoring of that location is required until the action specified in paragraph (5) has been taken.

(4) 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 paragraph (2) or (3), above, shall be re-monitored 1 month from the initial exceedance. If the 1-month re-monitoring 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 re-monitoring shows an exceedance, the actions specified in paragraph (3) or (5) must be taken.

(5) 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 must 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 Department for approval.

e. The permittee must implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

[40 CFR 63.1960(c)]

A.16. Surface Methane Monitoring Instrumentation. The permittee must comply with following instrumentation specifications and procedures for surface emission monitoring devices:

a. The portable analyzer must meet the instrument specifications provided in Section 6 of Method 21 of Appendix A of 40 CFR 60, except that "methane" replaces all references to "VOC".

b. The calibration gas must be methane, diluted to a nominal concentration of 500 parts per million in air.

c. To meet the performance evaluation requirements in Section 8.1 of EPA Method 21 of Appendix A of 40 CFR 60, the instrument evaluation procedures of section 8.1 of EPA Method 21 of Appendix A of 40 CFR 60 must be used.

d. The calibration procedures provided in Sections 8 and 10 of EPA Method 21 of Appendix A of 40 CFR 60 must be followed immediately before commencing a surface monitoring survey.

[40 CFR 63.1960(d)]

A.17. Startup, Shutdown, and Malfunction (SSM). The provisions of 40 CFR 63, Subpart AAAA apply at all times, including periods of startup, shutdown, or malfunction (SSM). During periods of SSM, the permittee must comply with the work practice specified in 40 CFR 63.1958(e) (Specific Condition **A.8.e.**) in lieu of the compliance provisions in 40 CFR 63.1960 (Specific Conditions **A.14.**, **A.15.**, and **A.16.**). [40 CFR 63.1960(e)]

A.18. Alternative Surface Methane Monitoring Frequency. 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. [40 CFR 63.1961(f)]

A.19. Monitoring of Landfill Gas Treatment System. The permittee shall maintain and operate all monitoring systems associated with the treatment system in accordance with the site-specific treatment system monitoring plan required in 40 CFR 63.1983(b)(5)(ii) (see Specific Condition **A.34.b.(3)**) The permittee shall:

a. Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the treatment system at least every 15 minutes; and

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

[40 CFR 63.1961(g)]

A.20. Operation and Maintenance Requirements. At all times, the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.1955(c)]

A.21. Determining Compliance with 40 CFR 63, Subpart AAAA. Compliance is determined using performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data collected under 40 CFR 63.1961(b)(1), (c)(1), and (d) are used to demonstrate compliance with the operating conditions for control systems. If a deviation occurs, you have failed to meet the control device operating conditions described in this subpart and have deviated from the requirements of this subpart. Compliance with the emissions standards and the operating standards of 40 CFR 63.1958 is required at all times. [40 CFR 63.1964]

A.22. Deviation for 40 CFR Part 63, Subpart AAAA. A deviation is defined in 40 CFR 63.1990. For the purposes of the landfill monitoring, deviations include the items in paragraphs a. and b.

a. A deviation occurs when the control device operating parameter boundaries described in 40 CFR 63.1983(c)(1) are exceeded.

b. A deviation occurs when 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour.

[40 CFR 63.1965]

A.23. Compliance Averages for 40 CFR Part 63, Subpart AAAA. 3-hour block averages are calculated in the same way as they are calculated in 40 CFR 60, Subpart WWW, except that the data collected during the events listed in paragraphs a. – d. are not to be included in any average computed under Subpart AAAA: Averages are calculated according to 40 CFR 63.1983(b)(2)(i) for average combustion temperature and 40 CFR 63.1983(c)(1)(i) for 3-hour average combustion temperature for enclosed combustors, except that the data collected during the event listed in paragraph (a) of this condition are not to be included in any average computed under 40 CFR Part 63, Subpart AAAA.

a. Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.

b. Startups.

c. Shutdowns.

d. Malfunctions.

[40 CFR 63.1975

Recordkeeping and Reporting Requirements

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

Report	Reporting Deadline	Related Condition(s)
Revised Design Plan	90 days prior to expanding operations	**A.25.**
Facility Closure Report	Within 30 days after garbage cessation	**A.26**
Equipment Removal Report	30 days prior to removal	**A.27.**
Semi-annual Reports	Every 6 months	**A.28.**
Asbestos Disturbance Notice	45 days prior to disturbance	**A.30.**

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

A.25. Revised Design Plan. The permittee must submit a revised collection and control system design plan, as described in 40 CFR 63.1981(d) (and 40 CFR 60.767(c)), to the Department as follows:

a. At least 90 days before expanding operations to an area not covered by the previously approved design plan.

b. Prior to installing or expanding the gas collection system in a way that is not consistent with the design plan that was previously submitted to the Department.

{Permitting Note: The permittee submitted the initial GCCS design plan on April 30, 2018, to satisfy the requirements of 40 CFR 63.1981(d) and 40 CFR 60.767(c).}

[40 CFR 60.767(d) and 40 CFR 63.1981(e)]

A.26. Facility Closure Report. The permittee must submit a closure report to the Department within 30 days of waste acceptance cessation. The Department 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 Department, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4). [40 CFR 60.767(e) and 40 CFR 63.1981(f)]

A.27. Equipment Removal Report. The permittee must submit an equipment removal report to the Department 30 days prior to removal or cessation of operation of the control equipment.

a. The equipment removal report must contain all of the following items:
   (1) A copy of the closure report submitted in accordance with 40 CFR 63.1981(f) (and 40 CFR 60.767(e)) (see Specific Condition **A.26.**);
   (2) A copy of the initial performance test report demonstrating that the 15-year minimum control period has expired, unless the report of the results of the performance test has been submitted to the EPA via the EPA's CDX, or information that demonstrates that the collection and control system will be unable to operate for 15 years due to declining gas flows. In the equipment removal report, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the EPA's CDX; and
   (3) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 34 megagrams or greater of NMOC per year, unless the NMOC emission rate reports have been submitted to the EPA via the EPA's CDX. If the NMOC emission rate reports have been previously submitted to the EPA's CDX, a statement that the NMOC emission rate reports have been submitted electronically and the dates that the reports were submitted to the EPA's CDX may be submitted in the equipment removal report in lieu of the NMOC emission rate reports.

b. The Department may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 63.1957(b) (and 40 CFR 60.762(b)(2)(v)) have been met (see Specific Conditions **A.4.** & **A.10.**).

[40 CFR 60.767(f) and 40 CFR 63.1981(g)]

A.28. Semi-annual Reports. The permittee must submit to the Department semi-annual reports following procedures specified in 40 CFR 63.1981(l) (Specific Condition **A.32.**) For enclosed combustion devices and flares, reportable exceedances are defined under 40 CFR 63.1983(c) (see Specific Condition **B.33.**). The semi-annual reports must contain the following information:

a. Number of times that applicable parameters monitored under 40 CFR 63.1958(b), (c), and (d) (see Specific Conditions **A.8**. and **B.10.**) were exceeded and when the gas collection and control system was not operating under 40 CFR 63.1958(e), including periods of SSM. For each instance, report the date, time, and duration of each exceedance.
   (1) Provide a statement of the wellhead operational standard for temperature you are complying with for the period covered by the report. Indicate the number of times each of those parameters monitored under 40 CFR 63.1961(a)(4) were exceeded. For each instance, report the date, time, and duration of each exceedance.

   *{Permitting Note: While there is no operational standard for oxygen under 40 CFR 63.1958(c), its concentration is required to be monitored monthly pursuant to 40 CFR 63.1961(a) (See Specific Condition **A.11**).}*
   (2) Number of times the parameters for the site-specific treatment system in 40 CFR 63.1961(g) (see Specific Condition **A.19**.) were exceeded.

b. Description and duration of all periods when the gas stream was diverted from the control device or treatment system through a bypass line or the indication of bypass flow as specified under 40 CFR 63.1961 (Specific Conditions **A.11.** and **B.10.**).

c. Description and duration of all periods when the control device or treatment system was not operating and length of time the control device or treatment system was not operating.

d. All periods when the collection system was not operating.

e. The location of each exceedance of the 500 parts per million methane concentration as provided in 40 CFR 63.1958(d) (Specific Condition **A.8.d.**) and the concentration recorded at each location for which an exceedance was recorded in the previous month. For location, you must determine the latitude and

longitude coordinates of each exceedance using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.

f. The date of installation and the location of each well or collection system expansion added pursuant to 40 CFR 63.1960(a)(3) and (4), (b), and (c)(4) (Specific Conditions **A.14.c.**, **A.14.d.**, and **A.15.d.**)

g. For any corrective action analysis for which corrective actions are required in 40 CFR 63.1960(a)(3)(i) or (a)(5) (Specific Conditions **A.14.c.** or **A.14.d.**) and that take more than 60 days to correct the exceedance, the root cause analysis conducted, including a description of the recommended corrective action(s), the date for corrective action(s) already completed following the positive pressure or high temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

h. When required to conduct enhanced monitoring in 40 CFR 63.1961(a)(5) and (6) (Specific Condition **A.11.**) the permittee must include the results of all monitoring activities conducted during the period.

(1) For each monitoring point, report the date, time, and well identifier along with the value and units of measure for oxygen, temperature (wellhead and downwell), methane, and carbon monoxide.

(2) Include a summary trend analysis for each well subject to the enhanced monitoring requirements to chart the weekly readings over time for oxygen, wellhead temperature, methane, and weekly or monthly readings over time, as applicable for carbon monoxide.

(3) Include the date, time, staff person name, and description of findings for each visual observation for subsurface oxidation event.

[40 CFR 1981(h) and 40 CFR 60.767(g)]

{Permitting note: While 40 CFR 60, Subpart XXX, require these reports annually, 40 CFR 63, Subpart AAAA, requires them semi-annually.}

A.29. Corrective Action Reports. The permittee must submit reports related to corrective actions according to paragraphs a and b, below.

a. For corrective action that is required according to 40 CFR 63.1960(a)(3) or (a)(4) (Specific Conditions **A.14.c.** or **A.14.d.**) and is expected to take longer than 120 days after the initial exceedance to complete, you must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Department as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature monitoring value of 62.8°C (145°F). The Department must approve the plan for corrective action and the corresponding timeline.

b. For corrective action that is required according to 40 CFR 63.1960(a)(3) or (a)(4) (Specific Conditions **A.14.c.** or **A.14.d.**) and is not completed within 60 days after the initial exceedance, you must submit a notification to the Department as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature exceedance.

[40 CFR 63.1981(j) and 40 CFR 60.767(j)]

A.30. Asbestos Disturbance Notification. The permittee must notify the compliance office in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered (See Specific Condition **A.9.j**.) If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the compliance office at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:

a. Scheduled starting and completion dates.

b. Reason for disturbing the waste.

c. Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Department may require changes in the emission control procedures to be used.

d. Location of any temporary storage site and the final disposal site

[40 CFR 61.154(j)

A.31. 24-Hour High Temperature Report. Where permittee seeks to demonstrate compliance with the operational standard for temperature in 40 CFR 63.1958(c)(1) and a landfill gas temperature measured at either the wellhead or at any point in the well is greater than or equal to 76.7°C (170°F) and the carbon monoxide concentration measured is greater than or equal to 1,000 ppmv, then the permittee must report the date, time, well identifier, temperature and carbon monoxide reading via email to the Department within 24 hours of the measurement unless a higher operating temperature value has been approved by the Department. [40 CFR 63.1981(k)]

A.32. Electronic Reporting. The permittee must submit reports electronically according to the following:

a. Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures in paragraphs (1) – (3) below:

(1) Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (*https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert*) at the time of the test. Submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's CDX (*https://cdx.epa.gov/*). The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

(2) Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test. The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.

(3) Confidential business information (CBI). If you claim some of the information submitted under 40 CFR 63.1981(a) is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph **a.(1)** of this condition.

b. The permittee must submit reports (Specific Condition **A.28.**) to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's Central Data Exchange at https://cdx.epa.gov/. The permittee must use the appropriate electronic report in CEDRI for 40 CFR 63, Subpart AAAA or an alternate electronic file format consistent with the XML schema listed on the CEDRI Web site (https://www3.epa.gov/ttn/chief/cedri/index.html). Once the spreadsheet template upload/forms for the reports have been available in CEDRI for 90 days, the permittee must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted. The NMOC emission rate reports, semi-annual reports, and bioreactor 40-percent moisture reports should be electronically reported as a spreadsheet template upload/form to CEDRI. If the reporting form specific to this subpart is not

available in CEDRI at the time that the report is due, the permittee must submit the report to the Department at the appropriate address listed in 40 CFR 63.13.

[40 CFR 63.1981(l) and 40 CFR 60.767(i)]

{Permitting note: Once reports are submitted electronically to US EPA, a notification of such should be provided to the FLDEP Compliance Authority.}

A.33. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

A.34. 40 CFR 63 Subpart AAAA Records. The permittee must keep records as specified in this subpart. You must also keep records as specified in the general provisions of 40 CFR part 63 as shown in Specific Condition **A.39**.:

a. Except as provided in 40 CFR 63.1981(d)(2), each owner or operator of an MSW landfill subject to the provisions of 40 CFR 63.1959(b)(2)(ii) and (iii) must keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered 40 CFR 63.1959(b) (see Specific Condition **A.4.**), 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.

b. Except as provided in 40 CFR 63.1981(d)(2), each owner or operator of a controlled landfill must keep up-to-date, readily accessible records for the life of the control equipment of the data listed in paragraphs b.(1), b.(2), and b.(3) as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring must be maintained for a minimum of 5 years. Records of the control device vendor specifications must be maintained until removal.

(1) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with 40 CFR 63.1959(b)(2)(ii) (see Specific Condition **A.4.**):

(a) The maximum expected gas generation flow rate as calculated in 40 CFR 63.1960(a)(1) (see Specific Condition **A.14.**).

(b) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR 63.1962(a)(1) and (2) (see Specific Condition **A.7.**).

(2) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with 40 CFR 63.1959(b)(2)(iii)(A) through use of a non-enclosed flare (see Specific Conditions **A.4.** and **B.10.**), 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 63.11; 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.

(3) Where the permittee seeks to demonstrate compliance with 40 CFR 63.1959(b)(2)(iii)(C) (Specific Condition **A.4.c(2))** through use of a landfill gas treatment system (Specific Condition **C.5.**):

(a) *Bypass records.* Records of the flow of landfill gas to, and bypass of, the treatment system.

(b) *Site-specific treatment monitoring plan.* The permittee shall prepare a site-specific treatment monitoring plan to include:

1. Monitoring records of parameters that are identified in the treatment system monitoring plan and that ensure the treatment system is operating properly for each intended end use of the treated landfill gas. At a minimum, records should include records of filtration, de-watering, and compression parameters that ensure the treatment system is operating properly for each intended end use of the treated landfill gas.

2. Monitoring methods, frequencies, and operating ranges for each monitored operating parameter based on manufacturer's recommendations or engineering analysis for each intended end use of the treated landfill gas.
3. Documentation of the monitoring methods and ranges, along with justification for their use.
4. List of responsible staff (by job title) for data collection.
5. Processes and methods used to collect the necessary data.
6. Description of the procedures and methods that are used for quality assurance, maintenance, and repair of all continuous monitoring systems (CMS).

c. Except as provided in 40 CFR 63.1981(d)(2), each owner or operator of a controlled landfill must keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in 40 CFR 63.1961 (see Specific Conditions **A.11.** and **B.10.**) 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 permittee must keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40 CFR 63.1961(b)(2)(ii), (c)(2)(ii), and (g)(2) (see Specific Condition Error! Reference source not found.).

(2) Each owner or operator seeking to comply with the provisions of 40 CFR 63, Subpart AAAA by use of a non-enclosed flare must keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under 40 CFR 63.1961(c) (see Specific Condition **B.10.**), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

(3) Each owner or operator of a landfill seeking to comply with 40 CFR 63.1959(b)(2) using an active collection system designed in accordance with 40 CFR 63.1959(b)(2)(ii) must keep records of periods when the collection system or control device is not operating.

(4) Where an owner or operator seeks to demonstrate compliance with the operational standard in 40 CFR 63.1958(e)(1), the date, time, and duration of each startup and/or shutdown period, recording the periods when the affected source was subject to the standard applicable to startup and shutdown.

(5) Where an owner or operator seeks to demonstrate compliance with the operational standard in 40 CFR 63.1958(e)(1), in the event that an affected unit fails to meet an applicable standard, record the information below in this paragraph:

(a) For each failure record the date, time and duration of each failure and the cause of such events (including unknown cause, if applicable).

(b) For each failure to meet an applicable standard; record and retain a list of the affected sources or equipment.

(c) Record actions taken to minimize emissions in accordance with the general duty of 40 CFR 63.1955(c) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

(6) In lieu of the requirements specified in 40 CFR 63.8(d)(3) you must keep the written procedures required by 40 CFR 63.8(d)(2) on record for the life of the affected source or until the affected source is no longer subject to the provisions of 40 CFR Part 63, to be made available for inspection, upon request, by the Department. If the performance evaluation plan is revised, you must keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Department, for a period of 5 years after each revision to the plan. The program of corrective action should be included in the plan required under 40 CFR 63.8(d)(2).

d. Except as provided in 40 CFR 63.1981(d)(2), 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) Keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under 40 CFR 63.1960(b).

(2) 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 40 CFR 63.1962(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in 40 CFR 63.1962(a)(3)(ii) (see Specific Condition **A.7.**).

e. Except as provided in 40 CFR 63.1981(d)(2), keep for at least 5 years up-to-date, readily accessible records of the following items:

(1) All collection and control system exceedances of the operational standards in 40 CFR 63.1958 (see Specific Condition **A.8.**), the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

(2) Each wellhead temperature monitoring value of 55 degrees Celsius (131 degrees Fahrenheit) or above, each wellhead nitrogen level at or above 20 percent, and each wellhead oxygen level at or above 5 percent, except:

(a) When an owner or operator seeks to demonstrate compliance with the compliance provisions for wellhead temperature in 40 CFR 63.1958(c)(1), the records of each wellhead temperature monitoring value of 62.8°C (145°F) or above instead of values greater than 55°C (131°F).

(b) Each owner or operator required to conduct the enhanced monitoring provisions in 40 CFR 63.1961(a)(5), must also keep records of all enhanced monitoring activities.

(c) Each owner or operator required to submit the 24-hour high temperature report in 40 CFR 63.1981(k), must also keep a record of the email transmission.

(3) For any root cause analysis for which corrective actions are required in 40 CFR 63.1960(a)(3)(i)(A) or (a)(4)(i)(A) (Specific Condition **A.14.c.(1)** or **A.14.d.(1)**), keep a record of the root cause analysis conducted, including a description of the recommended corrective action(s) taken, and the date(s) the corrective action(s) were completed.

(4) For any root cause analysis for which corrective actions are required in 40 CFR 63.1960(a)(3)(i)(B) or (a)(4)(i)(B) (Specific Condition **A.14.c.(2)** or **A.14.d.(2)**), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(5) For any root cause analysis for which corrective actions are required in 40 CFR 63.1960(a)(3)(i)(C) or (a)(4)(i)(C) (Specific Condition **A.14.c.(3)** or **A.14.d.(3)**), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates, and a copy of any comments or final approval on the corrective action analysis or schedule from the Department.

f. Landfill owners or operators who convert design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than 2.5 million Mg or 2.5 million m^3, as provided in the definition of "design capacity," must keep readily accessible, on-site records of the annual recalculation of site-specific density, design capacity, and the supporting documentation. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

g. Except as provided in 40 CFR 63.1981(d)(2), keep for at least 5 years up-to-date, readily accessible records of all collection and control system monitoring data for parameters measured in 40 CFR 63.1961(a)(1) through (6) (Specific Condition **A.11.**).

h. Where an owner or operator seeks to demonstrate compliance with the operational standard for temperature in 40 CFR 63.1958(c)(1), you must keep the following records.

(1) Records of the landfill gas temperature on a monthly basis as monitored in 40 CFR 63.1960(a)(4).

(2) Records of enhanced monitoring data at each well with a measurement of landfill gas temperature greater than 62.8°C (145°F) as gathered in 40 CFR 63.1961(a)(5) and (6).

(3) Any records required to be maintained by 40 CFR 63, Subpart AAAA that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

[40 CFR 63.1983 and 40 CFR 60.768]

A.35. Asbestos Records and Reports. Permittee shall maintain records and reports in accordance with 40 CFR 61.154(e) (see Specific Condition **A.9.**) and for a period of at least five years. [40 CFR 61.154(e)]

A.36. Asbestos Location Records. Permittee shall maintain, until closure, location records of the asbestos containing waste subject to 40 CFR 61.154 in accordance with 40 CFR 61.154(f) (see Specific Condition **A.9.**). [40 CFR 61.154(f)]

Other Requirements

A.37. 40 CFR 60, Subpart A – General Provisions. In addition to the above requirements, the permittee must also comply with the requirements contained in 40 CFR 60, Subpart A - General Provisions. [Rule 62-213.440, F.A.C. and 40 CFR 60, Subpart A] Link to 40 CFR 60, Subpart A

A.38. 40 CFR 61, Subpart A – General Provisions. In addition to the above requirements, the permittee must also comply with the requirements contained in 40 CFR 61, Subpart A - General Provisions. [Rule 62-213.440, F.A.C. and 40 CFR 61, Subpart A] Link to 40 CFR 61, Subpart A

A.39. 40 CFR 63, Subpart A – General Provisions. In addition to the above requirements, the permittee must also comply with the following requirements contained in 40 CFR 63, Subpart A - General Provisions. Link to 40 CFR 63, Subpart A

Part 63 citation	Description	Applicable to subpart AAAA	Explanation
63.1(a)	Applicability: General applicability of NESHAP in this part	Yes	
63.1(b)	Applicability determination for stationary sources	Yes	
63.1(c)	Applicability after a standard has been set	Yes	
63.1(e)	Applicability of permit program before relevant standard is set	Yes	
63.2	Definitions	Yes	
63.3	Units and abbreviations	Yes	
63.4	Prohibited activities and circumvention	Yes	
63.5(a)	Construction/reconstruction	Yes	

Part 63 citation	Description	Applicable to subpart AAAA	Explanation
63.5(b)	Requirements for existing, newly constructed, and reconstructed sources	Yes	
63.5(d)	Application for approval of construction or reconstruction	Yes	
63.5(e) and (f)	Approval of construction and reconstruction	Yes	
63.6(a)	Compliance with standards and maintenance requirements - applicability	Yes	
63.6(b) and (c)	Compliance dates for new, reconstructed, and existing sources	Yes	
63.6(e)(1)(i)-(ii)	Operation and maintenance requirements	No	See 63.1955(c) for general duty requirements.
63.6(e)(3)(i)-(ix)	SSM plan	No	
63.6(f)(1)	Exemption of nonopacity emission standards during SSM	No	
63.6(f)(2) and (3)	Compliance with nonopacity emission standards	Yes	
63.6(g)	Use of an alternative nonopacity standard	Yes	
63.6(h)	Compliance with opacity and visible emission standards	No	Subpart AAAA does not prescribe opacity or visible emission standards.
63.6(i)	Extension of compliance with emission standards	Yes	
63.6(j)	Exemption from compliance with emission standards	Yes	
63.7	Performance testing	Yes	
63.7(e)(1)	Conditions for performing performance tests	No	40 CFR 63.1959(f) specifies the conditions for performing performance tests.
63.8(a) and (b)	Monitoring requirements - Applicability and conduct of monitoring	Yes	
63.8(c)(1)	Operation and Maintenance of continuous emissions monitoring system	Yes	
63.8(c)(1)(i)	Operation and Maintenance Requirements	No	Unnecessary due to the requirements of 63.8(c)(1) and the requirements for a quality control plan for monitoring equipment in 63.8(d)(2).
63.8(c)(1)(ii)	Operation and Maintenance Requirements	No	
63.8(c)(1)(iii)	SSM plan for monitors	No	
63.8(c)(2)-(8)	Monitoring requirements	Yes	
63.8(d)(1)	Quality control for monitors	Yes	
63.8(d)(2)	Quality control for monitors	Yes	
63.8(d)(3)	Quality control records	No	See 63.1983(c)(8).
63.9(a), (c), and (d)	Notifications	Yes	

Part 63 citation	Description	Applicable to subpart AAAA	Explanation
63.9(b)	Initial notifications	Yes[1]	
63.9(e)	Notification of performance test	Yes[1]	
63.9(f)	Notification of visible emissions/opacity test	No	Subpart AAAA does not prescribe opacity or visible emission standards.
63.9(g)	Notification when using CMS	Yes[1]	
63.9(h)	Notification of compliance status	Yes[1]	
63.9(i)	Adjustment of submittal deadlines	Yes	
63.9(j)	Change in information already provided	Yes	
63.10(a)	Recordkeeping and reporting - general	Yes	
63.10(b)(1)	General recordkeeping	Yes	
63.10(b)(2)(i)	Startup and shutdown records	No	See 63.1983(c)(6) for recordkeeping for periods of startup and shutdown.
63.10(b)(2)(ii)	Recordkeeping of failures to meet a standard	No	See 63.1983(c)(6)-(7) for recordkeeping for any exceedance of a standard.
63.10(b)(2)(iii)	Recordkeeping of maintenance on air pollution control equipment	Yes	
63.10(b)(2)(iv)-(v)	Actions taken to minimize emissions during SSM	No	See 63.1983(c)(7) for recordkeeping of corrective actions to restore compliance.
63.10(b)(2)(vi)	Recordkeeping for CMS malfunctions	Yes	
63.10(b)(2)(vii)-(xiv)	Other Recordkeeping of compliance measurements	Yes	
63.10(c)	Additional recordkeeping for sources with CMS	No	See 63.1983 for required CMS recordkeeping.
63.10(d)(1)	General reporting	Yes	
63.10(d)(2)	Reporting of performance test results	Yes	
63.10(d)(3)	Reporting of visible emission observations	No	
63.10(d)(4)	Progress reports for compliance date extensions	Yes	
63.10(d)(5)	SSM reporting	No	All exceedances must be reported in the semi-annual report required by 63.1981(h).
63.10(e)	Additional reporting for CMS systems	Yes	
63.10(f)	Recordkeeping/reporting waiver	Yes	
63.11	Control device requirements/flares	Yes	60.18 is required before September 27, 2021. However, 60.18 and 63.11 are equivalent.
63.12(a)	State authority	Yes	
63.12(b)-(c)	State delegations	Yes	
63.13	Addresses	Yes	
63.14	Incorporation by reference	Yes	

Part 63 citation	Description	Applicable to subpart AAAA	Explanation
63.15	Availability of information and confidentiality	Yes	
[1] If permittee has complied with requirements that are parallel to the requirements of the part 63 citation of this table under 40 CFR part 60, subpart WWW or subpart XXX, or a state or federal plan that implements 40 CFR part 60, subpart Cc or Cf, then additional notification for that requirement is not required.			

[40 CFR 63.1955(b), 63.1980 and Table 1 of Subpart AAAA]

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

EU No.	Brief Description
002	3,600 SCFM Open Candlestick Utility Flare, Flare #1
007	4,800 SCFM Open Candlestick Utility Flare, Flare #2

The landfill operates two open candlestick utility flares for total current flaring capacity of 8,400-scfm. The flares are intended to operate as a failsafe backup system to control gaseous emissions during LFG engines (EU 006) inoperative periods.

The primary Flare #1 (EU 002) is a 3,600-scfm candle type open flare, Model No. PCFT1454I12, manufactured by LFG Specialties. Volumetric flow to the flare is measured using a thermal dispersion flow meter and flow is continuously recorded on a data recorder. The flare has an automatic propane pilot system and control panel that monitors the presence and temperature of pilot flame. The flare is 1 foot in diameter and the height of the flare is 58 feet above ground.

Flare #2 (EU 007) is a 4,800-scfm capacity candle type open flare, Model CFT1654I16 manufactured by LFG Specialties. Volumetric flow to the flare is measured using a thermal dispersion flow meter and flow is continuously recorded on a data recorder. The flare has an automatic propane pilot system and control panel that monitors the presence and temperature of pilot flame. The flare is 1.3 feet in diameter and the height of the flare is 54 feet above ground.

Prior to combustion in the flares or the LFG engines (EU 006), collected landfill gas (LFG) is treated in a scrubbing system manufactured by MV Technologies, for the purpose of reducing the concentrations of hydrogen sulfide (H_2S). This equipment is referred to as the H_2S scrubbing system in this permit. Reducing H_2S content prior to combustion in either the flares or the LFG engines effectively reduce SO_2 emissions.

{Permitting Note: In accordance with Rule 62-212.400, PSD, F.A.C., Flare #2 is subject to Best Available Control Technology (BACT) determinations for the following air pollutants: CO, NOx, PM, PM_{10}, $PM_{2.5}$, VOC, NMOC and GHG. The final BACT determinations were included in Permit 0970079-011-AC/PSD-FL-429 and referenced in Appendix BD. Other emissions standards and performance restrictions specified in this permit allow the emission units to escape PSD preconstruction review for sulfur dioxide (SO_2) emissions.

Both flares are regulated pursuant to 40 CFR 60, Subpart A - General Provisions, adopted and incorporated by reference in Rule 62-204.800(8)(d), F.A.C.; 40 CFR 60, Subpart XXX, Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014, adopted and incorporated by reference in Rule 62-204.800(8)(b)77, F.A.C.; 40 CFR 63, Subpart A, adopted and incorporated by reference in Rule 62-204.800(11)(d)1.,F.A.C.; and 40 CFR 63, Subpart AAAA, adopted and incorporated by reference in Rule 62-204.800(11)(b)59., F.A.C.}

Essential Potential to Emit (PTE) Parameters

B.1. Hours of Operation. The flares may operate continuously (i.e., 8,760 hours/year). [Rule 62-210.200(201), *Definitions - Potential to Emit (PTE)*, F.A.C.; and Permit No. 0970079-013-AC/PSD-FL-429A.]

B.2. Flares: The flares may be moved during the landfill expansion project. [Permit No. 0970079-013-AC/PSD-FL-429A.]

B.3. Authorized Fuel. LFG fired in the new flare (EU 007) shall be H_2S scrubbed, treated & conditioned sufficiently to meet the emission standards and limitations in Specific Conditions **B.4**. through **B.9.** of this section. [Rules 62-212.400, *PSD - BACT Determination*, and Rule 62-212.400(12), *Source Obligation - escape-PSD*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A.]

{Permitting Note: While not required for Flare #1 by PSD-FL-429, the H_2S Scrubbing System was constructed and installed to treat LFG fired in both Flares #1 and #2.}

Emission Limitations and Standards

B.4. CO, VOC, NMOC, NOx & GHG Emissions. The permittee shall minimize CO, VOC, NMOC, NOx and GHG emissions by following the operational requirements of this permit. The operational requirements of this permit shall serve as a surrogate for CO, VOC, NMOC, NOx & GHG emissions. [Rule 62-212.400, *Prevention of Significant Deterioration - BACT Determination*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A.]

B.5. Particulate Matter (PM) - PM/PM_{10}/$PM_{2.5}$. The requirements stated in the previous Specific Condition **B.4.** for CO, VOC, NMOC, NOx and GHG emissions also apply for PM emissions. The use of treated LFG also minimizes PM/PM_{10}/$PM_{2.5}$ emissions. The LFG shall be treated to remove PM larger than 10 microns prior to combusting in the flares. The flares shall be operated with air assist to promote proper mixing and complete combustion of LFG and to reduce VE. VE shall serve as a surrogate for PM/PM_{10}/$PM_{2.5}$ emissions. [Rule 62-212.400, *Prevention of Significant Deterioration - BACT Determination*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A.]

B.6. Visible Emissions (VE). Flares #1 and #2 shall be operated with no visible emissions (VE) as determined by the methods specified in 40 CFR 60.18(f) (Specific Condition **B.13**.), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. [Rules 62-204.800(8)(d), *Federal Regulations Adopted by Reference*, and 62-212.400, *Prevention of Significant Deterioration - BACT Determination*, F.A.C.; and 40 CFR 60.18(c)(1); and Permit 0970079-013-AC/PSD-FL-429A.]

B.7. H_2S Scrubbing System. The permittee shall maintain and operate a two-stage H_2S scrubbing system for the JED LFG with the first stage constructed and operated in the first PSD phase ("PSD Phase 1") and the second stage constructed and operated in the second PSD phase ("PSD Phase 2"). The two stages shall have the following design efficiencies:

a. First stage - Reduce LFG H_2S concentration to < 160 ppmv; and,

b. Second stage - Reduce LFG H_2S concentration to < 65 ppmv.

H_2S scrubbing system shall achieve the H_2S reduction concentrations required to restrict actual SO_2 emissions from the new engines (EU 006) and flares, as well as future engines and flares, combined in accordance with Specific Condition **B.8.** The H_2S scrubbing system shall be maintained in accordance with the manufacturer's recommendations or determined best practices. [Rules 62-4.160(2) and 62-212.400(12), *Source Obligation - escape-PSD*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

B.8. Sulfur Dioxide (SO_2) Emissions. To ensure that PSD is avoided, SO_2 emissions from all LFG-fired engines and Flare #2 combined shall be 39 tons or less per consecutive 12 month period. Compliance with this SO_2 emissions cap shall be demonstrated on a 12-month rolling basis using the following information: the sulfur level in the scrubbed LFG (Specific Condition **B.17.**); the amount of LFG combusted by all LFG-fired engines (EU 006) and open flares combined; and, the assumption that all sulfur is converted to SO_2. [Rules 62-4.160(2) and 62-212.400(12), *Source Obligation - escape-PSD*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

B.9. Greenhouse Gases (GHG). The operational requirements of this permit minimize GHG emissions (being primarily N_2O & CH_4). The collection of the LFG and subsequent combustion in the flares also minimizes GHG emissions. NOx & CO emissions shall serve as primary surrogates for GHG emissions (being primarily N_2O & CH_4). [Rule 62-212.400, *PSD BACT Determination*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

Operational Requirements

B.10. Monitoring of Operations. The permittee must install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment, in paragraphs **a** and **b** below:

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

b. A device that records flow to and bypass of the flare. The permittee must:

(1) Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the control device at least every 15 minutes; and

(2) 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 must 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.

c. These monitoring requirements apply at all times the affected source is operating, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions and required monitoring system quality assurance or quality control activities. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The permittee is required to complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable.

[40 CFR 63.1961(c) &(h) and 40 CFR 60.766 (c) & (h)]

B.11. General Control Device and Work Practice Requirements.

a. The flares shall be operated with a flame present at all times, as determined by the methods specified in 40 CFR 60.18(f) (Specific Condition **B.13**.).

b. The flares used to comply with provisions of 40 CFR 60, Subpart A shall be operated at all times when emissions may be vented to them.

c. Owners or operators of flares used to comply with the provisions of 40 CFR 60 shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts of 40 CFR 60 will provide provisions stating how owners or operators of flares shall monitor these control devices.

[Rules 62-204.800(8)(d), *Federal Regulations Adopted by Reference*, and 62-212.400, *Prevention of Significant Deterioration - BACT Determination*, F.A.C.; 40 CFR 60.18(c)(2), (d) &(e); and Permit 0970079-013-AC/PSD-FL-429A]

B.12. Exit Velocity. The flares shall be operated with an exit velocity, in accordance with 40 CFR 60.18(c)(4) and (5), as follows:

a. Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4) (See Specific Condition.**B.13.d.**), less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (1) and (2) below:

(1) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4) (See Specific Condition **B.13.d**), 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).

(2) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4) (See Specific Condition **B.13.d**), less than the velocity, V_{max}, as determined by the method specified in 40 CFR 60.18(f)(5) (Specific Condition **B.13.e**), and less than 122 m/sec (400 ft/sec) are allowed.

b. Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, Vmax, as determined by the method specified in 40 CFR 60.18(f)(6) (See Specific Condition **B.13.f.**).

[Rules 62-204.800(8)(d), *Federal Regulations Adopted by Reference*, and 62-212.400, *Prevention of Significant Deterioration - BACT Determination*, F.A.C.; and 40 CFR 60.18(c)(4) & (5); and Permit 0970079-013-AC/PSD-FL-429A]

B.13. Flare Compliance Requirements.

a. Method 22 of appendix A to 40 CFR 60 shall be used to determine the compliance of flares with the VE provisions of Specific Condition **B.6.** (40 CFR 60.18(c)(1)). The observation period is 2 hours and shall be used according to Method 22. The observation period may be shorter if approved by the Department.

b. 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.

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

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

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946–77 or 90 (Reapproved 1994) (Incorporated by reference as specified in 40 CFR 60.17); and

H_i = Net heat of combustion of sample component i, kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382–76 or 88 or D4809–95 (incorporated by reference as specified in 40 CFR 60.17) if published values are not available or cannot be calculated.

d. 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.

e. The maximum permitted velocity, V_{max}, for flares complying with Specific Condition **B.12.a.(2)** (40 CFR 60.18 (c)(4)(iii)) shall be determined by the following equation.

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

Where:

V_{max} = Maximum permitted velocity, M/sec
28.8 = Constant
31.7 = Constant
H_T = The net heating value as determined in paragraph **c** of this condition.

f. The maximum permitted velocity, V_{max}, for air-assisted flares complying with Specific Condition **B.12.b**. (40 CFR 60.18 (c)(4)(iii)) shall be determined by the following equation.

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

Where:

V_{max} = Maximum permitted velocity, m/sec
8.706 = Constant
0.7084 = Constant
H_T = The net heating value as determined paragraph **c** of this condition.

[40 CFR 60.18(f)]

Test Methods and Procedures

B.14. Test Methods: Required tests shall be performed in accordance with the following reference methods:

Method(s)	Description of Method(s) and Comment(s)
ASTM D1945-03 (1)	Alternative Method of Determining Net Heating Value of Landfill Gas
In-place Calibrated Flow Meter (1)	Determining Flare Gas Exit Velocity
EPA Method 22	Visual Determination of Smoke Emissions from Flares

The above methods are described in Chapter 62-297, F.A.C. and/or 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Chapter 62-297, F.A.C. and Rule 62-204.800(9)(b)7 *Compliance and Performance Testing*, F.A.C.; and (1) U.S. EPA has approved]

B.15. Annual Compliance Test. During each calendar year (January 1st to December 31st), the flares shall be tested to demonstrate compliance with the emission limitations for visible emissions. [Rule 62-297.310(7) *General Emissions Test Requirements,* F.A.C.]

B.16. Visible Emission Test Method. EPA Method 22 shall be used to determine the compliance with the visible emission limit for the flares. The observation period is 2 hours and shall be used according to EPA Method 22. [Rule 62-204.800(8)(d) *Federal Regulations Adopted by Reference*, F.A.C., 40 CFR 60.18(f)(1); and Permit 0970079-013-AC/PSD-FL-429A.]

B.17. Semi-Annual LFG Sampling/Analysis - H_2S Content. The sulfur content of the H_2S scrubbing system's outlet concentration shall be sampled semi-annually, analyzed and the results provided to the compliance authority. Based on the sampling results and Rule 62-297.310(7)(b), F.A.C., the Department may request additional gas sampling and analyses. [Rules 62-4.160(2) and 62-212.400(12), *Source Obligation - escape-PSD*, 62-297.310(7)(b), *Emissions Testing Facilities*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

B.18. LFG - H_2S Content Analysis: The Permittee shall analyze the sulfur content of the H_2S scrubbing system's outlet concentration using ASTM Method D5504-12, or equivalent, and later methods. The LFG shall be collected and transported in an appropriate canister (e.g. SUMMA®, Bottle-Vac Sampler or equivalent). [Rules 62-4.160(2) and 62-212.400(12), *Source Obligation - escape-PSD*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

B.19. Actual Exit Velocity. The Permittee shall annually determine the actual exit velocity of each flare as determined by the methods specified in 40 CFR 60.18(f)(4) and (f)(6) (Specific Condition **B.13.d. & B.13.f.**). [62-212.400, *Prevention of Significant Deterioration - BACT Determination*, F.A.C. and 40 CFR 60.18(f)(4) and (f)(6); and Permit 0970079-013-AC/PSD-FL-429A]

B.20. Test Methods and Procedures for Methane Concentration. For the performance test required in 40 CFR 60.762(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in Specific Condition **B.13.c** (40 CFR 60.18(f)(3)) is calculated from the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three 30-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to

determine the landfill gas molecular weight for calculating the flare gas exit velocity under Specific Condition **B.13.d.** (40 CFR 60.18(f)(4)). [40 CFR 60.764(e)]

B.21. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, *General Emissions Test Requirements,* F.A.C.]

{Permitting Note: Air compliance test notifications can now be completed online in the Department's Business Portal. To access this online process, go to http://www.fldepportal.com/go/home and sign in (or register if you're a new user) from the link in the upper right corner of the page. On the Welcome page select the Submit option, then select Registration/Notification, and then click on Air Compliance Test Notifications. Once in the process, just carefully read the instructions on each screen (and under the Help tabs) to complete the notification.}

Recordkeeping and Reporting Requirements

B.22. Reporting Schedule. The following reports and notifications shall be submitted to the Compliance Authority:

Report	Reporting Deadline	Related Condition(s)
Equipment Removal	30 days prior to removal or cessation	**B.23.**
Compliance Test Reports	45 days after test	**B.24.**

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

B.23. Equipment Removal Report. The permittee must submit an equipment removal report to the Department 30 days prior to removal or cessation of operation of the control equipment.

a. The equipment removal report must contain all of the following items:
   (1) A copy of the closure report submitted in accordance with 40 CFR 60.767(e) (and 40 CFR 63.1981(f)) (Specific Condition **A.26.**);
   (2) A copy of the initial performance test report demonstrating that the 15-year minimum control period has expired, unless the report of the results of the performance test has been submitted to the EPA via the EPA's CDX, or information that demonstrates that the GCCS will be unable to operate for 15 years due to declining gas flows. In the equipment removal report, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the EPA's CDX; and
   (3) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 34 megagrams or greater of NMOC per year, unless the NMOC emission rate reports have been submitted to the EPA via the EPA's CDX. If the NMOC emission rate reports have been previously submitted to the EPA's CDX, a statement that the NMOC emission rate reports have been submitted electronically and the dates that the reports were submitted to the EPA's CDX may be submitted in the equipment removal report in lieu of the NMOC emission rate reports.

b. The Department may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 60.762(b)(2)(v) have been met (Specific Condition **A.4.e.**)

[40 CFR 60.767(f) and 40 CFR 63.1981(g)]

B.24. Compliance Test Reports. The test reports shall comply with applicable portions of Rule 62-297.310, F.A.C. The Department can require special compliance tests in accordance with Rule 62-297.310(8)(c), F.A.C. Other test methods and alternate compliance procedures may be used only after prior Departmental approval has been obtained in writing. Test reports shall comply with Rule 62-297.310(10), F.A.C. (See Appendix TR, Testing Requirements.) [Rules 62-297.310(8)(c) and 62-297.310(10), F.A.C.]

B.25. Semi-annual Reports. The permittee shall submit to the Department semi-annual reports following the procedure specified in 40 CFR 63.1981(l) (see Specific Condition **B.26**.). For flares, reportable exceedances are defined under 40 CFR 63.1983(c) (see Specific Condition **B.33.**).

a. Number of times that applicable parameters monitored under 40 CFR 60.1961(c) were exceeded (see Specific Condition **B.10.**).

b. Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under 40 CFR 63.1961 (see Specific Condition **B.10.**).

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

d. All periods when the collection system was not operating.

e. The location of each exceedance of the 500 parts per million methane concentration as provided in 40 CFR 63.1958(d) (see Specific Condition **A.8.d.**) and the concentration recorded at each location for which an exceedance was recorded in the previous month. For location, the permittee shall record the latitude and longitude coordinates of each exceedance using an instrument with an accuracy of at least 4 meters. The coordinates shall be in decimal degrees with at least five decimal places.

f. The date of installation and the location of each well or collection system expansion added pursuant to 40 CFR 63.1960(a)(3) and (4), (b) and (c)(4) (see Specific Conditions **A.14.** and **A.21.**).

[40 CFR 63.1981(h); and, 40 CFR 60.767(g)]

{Permitting note: While 40 CFR 60 Subpart XXX requires these reports annually, 40 CFR 63 Subpart AAAA requires them semi-annually.}

B.26. Electronic Reporting. The permittee must submit reports electronically according to the following:

a. Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures in paragraphs (1) – (3) below:

(1) Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (*https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert*) at the time of the test. Submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's CDX (*https://cdx.epa.gov/*). The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

(2) Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test. The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.

(3) Confidential business information (CBI). If you claim some of the information submitted under 40 CFR 63.1981(a) is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph a.(1) of this condition.

b. Each owner or operator required to submit reports following the procedure specified in this paragraph must submit reports to the EPA via CEDRI. CEDRI can be accessed through the EPA's CDX. The

owner or operator must use the appropriate electronic report in CEDRI for 40 CFR 63, Subpart AAAA or an alternate electronic file format consistent with the XML schema listed on the CEDRI website (*https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri*). Once the spreadsheet template upload/forms for the reports have been available in CEDRI for 90 days, the owner or operator must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted. The NMOC emission rate reports, semi-annual reports, and bioreactor 40-percent moisture reports should be electronically reported as a spreadsheet template upload/form to CEDRI. If the reporting forms specific to this subpart are not available in CEDRI at the time that the reports are due, the owner or operator must submit the reports to the Administrator at the appropriate address listed in 40 CFR 63.13.

[40 CFR 63.1981(l) and 40 CFR 60.767(i)]

{Permitting note: Once reports are submitted electronically to US EPA, a notification of such should be provided to the FLDEP Compliance Authority.}

B.27. H_2S Content Recordkeeping for LFG. The permittee shall maintain records of the sulfur content analysis of the H_2S scrubbing system's outlet concentrations. [Rules 62-4.160(2) and 62-212.400(12), *Source Obligation - escape-PSD*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

B.28. Flare #2 Monthly Records. Within ten (10) business days following each month, the permittee shall observe and record the following information in a written log or electronic format accessible to the Department:

a. number of hours of operation of Flare #2;

b. total monthly LFG flow rate to Flare #2; and

c. total SO_2 emissions for the month and previous 12-month period, for a rolling 12-month total.

Emissions of SO_2 shall be calculated from the monthly LFG consumption as well as the analytical results for the sulfur contents of the LFG representative of the given month of operation based on the semi-annual sampling for that period. [Rules 62-4.160(2) and 62-212.400(12), *Source Obligation - escape-PSD*, F.A.C.; and Permit No. 0970079-013-AC/PSD-FL-429A]

B.29. Flares – Actual Exit Velocity Reporting in AOR. The permittee shall annually report the actual exit velocity of each flare. The actual exit velocity shall be reported to the Department as an attachment to the facility's annual operating report (AOR). [Rules 62-4.070(1) & (3), *Reasonable Assurance* F.A.C.]

B.30. Flare #2 – Total SO_2 Emissions Reporting in AOR. The total SO_2 emissions from Flare #2 shall be reported in the AOR, along with the total LFG consumption. The sulfur content shall also be included with the AOR. [Rules 62-4.160(2) and 62-212.400(12), *Source Obligation - escape-PSD*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

B.31. Flares - VE Test Report. The required visible emissions test report shall also contain flare gas flow rate and temperature data. [Permit Nos. 0970079-001-AC & 0970079-002-AC.]

B.32. NSPS Flare Records. The permittee shall keep up-to-date, readily accessible records for the life of the control equipment of the following data: 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, 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. [40 CFR 60.768(b)(4)]

B.33. NSPS and NESHAP Flare Operation Parameter Records. The permittee shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in 40 CFR 63.1961 (and 40 CFR 60.766) (Specific Condition **B.10.**) 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.

a. The permittee shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40 CFR 63.1961 (and 40 CFR 60.766) (Specific Condition **B.10.**).

b. The permittee shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under 40 CFR 63.1961 (and 40 CFR 60.766) (Specific Condition **B.10.**), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

[40 CFR 60.768(c)(2) & (4) and 40 CFR 63.1983(c)(2)&(4)]

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

EU No.	Brief Description
006	Landfill Gas-to-Energy (LFGTE) Plant – 6 LFG-fired Engines

The LFG-to-energy plant, EU-006, consists of six (6) identical Caterpillar G3520C internal combustion engines with individual generators each rated at 1.6 MW. Landfill gas is conveyed under vacuum by blowers stationed at the LFGTE Facility. The landfill gas is treated for moisture (moisture conditioned) at the blower skid system prior to being routed to the hydrogen sulfide (H_2S) treatment system. Landfill gas is consumed as fuel in the engine/generator sets to produce electricity which is sold to Orlando Utilities Commission.

The CAT® G3520C internal combustion engine is a lean-burn water-cooled engine with a design power generation rating of 2,242 brake-horsepower (bhp) and a maximum fuel consumption rating of 6,511 Btu/bhp-hr (lower heating value, LHV). The maximum heat input rating for each engine is 14.6 million British thermal units per hour (MMBtu/hr, LHV) (engine power at 100% load is 2,242 bhp and nominal engine fuel consumption is 6,511 Btu/bhp-hr, LHV). Each engine will be connected to an electric power generator with a nominal rating of 1.6 MW. Using a fuel consumption tolerance of +2.5% (Caterpillar data), the maximum heat input could be 14.96 MMBtu/hr, LHV, which is equivalent to 16.61 MMBtu/hr, HHV. Exhaust gases from each engine will be vented through a 60-foot (ft) high stack, 1.33 feet in diameter.

{Permitting Note: In accordance with Rule 62-212.400, PSD, F.A.C., the above engines are subject to Best Available Control Technology (BACT) determinations for the following air pollutants: CO, NOx, PM, PM_{10}, $PM_{2.5}$, VOC, NMOC and GHG. The final BACT determinations were included in Permit 0970079-011-AC/PSD-FL-429 and referenced in Appendix BD. Other emissions standards and performance restrictions specified in this permit and as evaluated in Permit project 0970079-013-AC/PSD-FL-429A allow the emission units to escape PSD preconstruction review for sulfur dioxide (SO_2) emissions.

These spark ignition (SI) internal combustion engine (SI ICE) are regulated under 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines and 40 CFR 63 Subpart ZZZZ- National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, adopted by reference in Rule 62.204.800(8)(b), F.A.C. This permit section addresses "new" stationary non-emergency, SI RICE, firing landfill gas located at a major source of HAP, that have been modified, reconstructed, or commenced construction on or after June 12, 2006, and that have a post July 1, 2007 model year.}

Essential Potential to Emit (PTE) Parameters

C.1. LFG Engine/Generator Sets. Each LFG Engine will fire LFG generated and treated at the JED landfill with the following nominal design specifications per engine: a maximum engine rating of 2,242 bhp at 100% load; a nominal electrical generator rating of 1.6 MW; and a heat input rate of approximately 16.61 MMBtu/hour, HHV from LFG.

a. Each engine shall be equipped with an air-to-fuel ratio controller and electronic ignition timing to maintain efficient fuel combustion.

b. Each engine shall be equipped with an automatic fail-safe block valve which must be designed to stop the flow of LFG in the event of an engine failure. Excess LFG not fired in the engines shall be flared until the facility is required to meet the applicable collection and control system requirements in accordance with NSPS Subpart XXX in 40 CFR 60 and NESHAP Subpart AAAA in 40 CFR 63.

c. Each engine shall be equipped with a non-resettable elapsed time meter to indicate the elapsed engine operating time in cumulative hours.

d. A gas flow meter shall be installed to monitor the total volumetric flow rate of LFG to the engines.

[Rules 62-4.070(1)&(3), *Reasonable Assurance*, 62-210.200(201), *Definitions - Potential to Emit (PTE),* and 62-212.400, *PSD - BACT Determination*, F.A.C.; 40 CFR 63 6625(c); and Permit 0970079-013-AC/PSD-FL-429A]

{Permitting Note: The heat input rate is based on 100% load (2,242 bhp), a LFG higher heating value (HHV) of 446 British thermal units per standard cubic foot (Btu/scf) and an approximate LFG firing rate of 550-scfm per engine at a methane content of 44%.}

C.2. Hours of Operation. The engines may operate continuously (i.e., 8,760 hours/year). [Rule 62-210.200(201), *Definitions - Potential to Emit (PTE)*, F.A.C. and Permit 0970079-013-AC/PSD-FL-429A.]

C.3. Permitted Capacity. Each LFG engine has a maximum power rating of 2,242 bhp at 100% load (approximately 16.61 MMBtu/hour, HHV). The electrical generator set has a nominal power rating of 1,600 kilowatts (kW). [62-210.200(201), *Definitions - Potential to Emit (PTE)*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

C.4. Authorized Fuel. LFG fired in the engine/generator sets shall be H_2S scrubbed, treated & conditioned sufficiently to meet the emission standards and limitations in Specific Conditions **C.6.** through **C.14**. of this section. *{Permitting note: Propane may be used as a startup fuel.}* [Rules 62-212.400, *PSD - BACT Determination*, 62-212.400(12), *Source Obligation - escape-PSD,* F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

Control Technology

C.5. LFG Treatment & Conditioning System for Engines. The permittee shall operate a LFG treatment and conditioning system that includes initial gas dewatering (moisture knock-out vessel), gas compressors and blowers, air-to-gas coolers or equivalent and particulate removal. The particulate filtration system shall be designed to remove particulate matter larger than 10 microns via primary and polishing filters. The gas treatment system shall not be equipped with atmospheric vents. [Rule 62-212.400, *PSD - BACT Determination*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

Emission Limitations and Standards

C.6. CO, VOC, NMOC, NOx, PM/PM_{10}/$PM_{2.5}$ and GHG Emissions. The permittee shall minimize CO, VOC, NMOC, NOx, PM/PM_{10}/$PM_{2.5}$ and GHG emissions by installing, operating and maintaining the required LFG treatment systems [H_2S scrubbing system and treatment & conditioning system] as well as maintaining the air-to-fuel ratio to ensure efficient combustion. [Rule 62-212.400, *PSD - BACT Determination*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

C.7. Carbon Monoxide (CO). The advanced lean burn engine design, use of treated LFG, good combustion practices and proper maintenance minimizes CO emissions. CO emissions from each engine/generator set shall not exceed 3.5 gram per brake horsepower hour (g/bhp-hour) and 17.3 pounds/hour (lbs/hour). [Rules 62-204.800, *Federal Regulations Adopted by Reference*, and 62-212.400, *PSD - BACT Determination*, F.A.C., 40 CFR 60.4233(e) and Table 1; and Permit 0970079-013-AC/PSD-FL-429A]

{Permitting Note: For each engine/generator equivalent to 75.8 TPY of CO emissions. Compliance with the BACT limit assures compliance with the higher NSPS Subpart JJJJ limit of 5.0 g/bhp-hr.}

C.8. Volatile Organic Compounds (VOC). The advanced lean burn engine design, use of treated LFG, good combustion practices and proper maintenance minimizes VOC emissions. VOC emissions from each engine/generator set shall not exceed 0.56 g/bhp-hour and 2.77 lbs/hour. [Rules 62-204.800, *Federal Regulations Adopted by Reference*, and 62-212.400, *PSD - BACT Determination*, F.A.C., 40 CFR 60.4233(e) and Table 1; and Permit 0970079-013-AC/PSD-FL-429A]

{Permitting Note: For each engine/generator equivalent to 12.12 TPY of CO emissions. Compliance with the BACT limit assures compliance with the higher NSPS Subpart JJJJ limit of 1.0 g/bhp-hour.}

C.9. Nitrogen Oxides (NOx). The advanced lean burn engine design, use of treated LFG, good combustion practices and proper maintenance minimizes NOx emissions. NOx emissions from each engine/generator set shall not exceed 0.60 g/bhp-hour and 3.0 lbs/hour. [Rules 62-204.800, *Federal Regulations Adopted by Reference*, and 62-212.400, *PSD - BACT Determination*, F.A.C., 40 CFR 60.4233(e) and Table 1; and Permit 0970079-013-AC/PSD-FL-429A]

{Permitting Note: For each engine/generator equivalent to 13 TPY of NOx emissions}

C.10. Non-Methane Organic Compounds (NMOC). The advanced lean burn engine design, use of treated LFG, good combustion practices and proper maintenance minimizes NMOC emissions. NMOC emissions from each engine/generator set shall not exceed 0.85 g/bhp-hour and 4.2 lbs/hour. [Rule 62-212.400, *PSD - BACT Determination*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

{Permitting Note: For each engine/generator equivalent to 18.4 TPY of NMOC emissions.}

C.11. Particulate Matter (PM) - PM/PM_{10}/$PM_{2.5}$. The advanced engine design, use of treated LFG, good combustion practices and proper maintenance minimizes PM/PM_{10}/$PM_{2.5}$ emissions. The LFG shall also be treated to remove PM larger than 10 microns prior to combusting in the engines. In addition, as determined by EPA Method 9, visible emissions from each engine/generator set shall not exceed 10% opacity, based on a six-minute average. Visible emissions (VE) shall serve as a surrogate for PM/PM_{10}/$PM_{2.5}$ emissions. [Rule 62-212.400, *PSD - BACT Determination*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

{Permitting Note: Based on these work practice standards, the maximum PM/PM_{10}/$PM_{2.5}$ emissions from each engine/generator were estimated to be 0.24 g/bhp-hour, 1.2 lbs/hour and 5.2 tons/year.}

C.12. Visible Emissions (VE). VE from each engine/generator set exhaust shall not exceed 10% opacity. [Rule 62-212.400, *PSD - BACT Determination*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

C.13. Sulfur Dioxide (SO_2) Emissions. To ensure that PSD is avoided, SO_2 emissions from all LFG-fired engines and the open flare #2 (EU 007) combined shall be 39 tons or less per consecutive 12-month period. Compliance with this SO_2 emissions cap shall be demonstrated on a 12-month rolling basis using the following information: the sulfur level in the scrubbed LFG; the amount of LFG combusted by all LFG-fired engines and the open flare #2 (EU 007) combined; and, the assumption that all sulfur is converted to SO_2. [Rules 62-4.160(2) and 62-212.400(12), *Source Obligation - escape-PSD*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

C.14. Greenhouse Gases (GHG). The advanced engine design, use of treated LFG, good combustion practices and proper maintenance minimize GHG emissions (being primarily N_2O & CH_4). The collection of the LFG and subsequent combustion in the engines along with the energy production facility also minimize GHG emissions. NOx & CO emissions shall serve as primary surrogates for GHG emissions (being primarily N_2O & CH_4). [Rule 62-212.400, *PSD - BACT Determination*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

Monitoring of Operations

C.15. Gas Flow Meter Daily Records. Daily records shall be used to monitor and record the fuel usage for all engines combined with a separate fuel meter to measure the volumetric flow rate of the LFG. [40 CFR 63.6655(c); and Permit 0970079-013-AC/PSD-FL-429A]

Test Methods and Procedures

C.16. Periodic Compliance Tests - CO, VOC, NMOC, NOx & VE. Every 8,760 engine hours or at least once every three years, whichever comes first, each engine shall be tested to demonstrate compliance with the emissions standards for CO, NOx and VOC under 40 CFR 60, Subpart JJJJ as well as the BACT standards of this permit. During these periodic tests, at least one engine shall also be tested for opacity in accordance with EPA Method 9 and NMOC in accordance with EPA Method 25C, or Method 25A and 18, or alternative test method ALT-096 (TECO-55I) as instructed in the EPA's alternative approval letter in Appendix G of this

permit. [Rules 62-212.400, *PSD - BACT Determination*, 62-297.310(7) *Required Emissions Testing Facilities*, F.A.C.; and 40 CFR 60.4243(b)(2); and Permit 0970079-013-AC/PSD-FL-429A]

C.17. Compliance Tests - $PM/PM_{10}/PM_{2.5}$. Since VE serves as a surrogate for $PM/PM_{10}/PM_{2.5}$ emissions $PM/PM_{10}/PM_{2.5}$ emissions testing is not required. Instead, demonstration of compliance with the $PM/PM_{10}/PM_{2.5}$ BACT standards of this permit is through the VE testing. [Rules 62-212.400, *PSD - BACT Determination* and 62-297.310(7), *Required Emissions Testing Facilities,* F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

C.18. Compliance Tests – GHG. Since NOx & CO emissions serves as primary surrogates for GHG emissions (being primarily N_2O & CH_4) GHG emissions testing is not required. Instead, demonstration of compliance with the GHG BACT standards of this permit is through the NOx & CO emissions testing. Low NOx emissions indicate low formation of N_2O, a GHG gas. Low CO emissions is an indicator of complete combustion, i.e., conversion of CH_4 (a GHG gas) to CO_2 and water. [Rules 62-212.400, *PSD - BACT Determination* and 62-297.310(7), *Required Emissions Testing Facilities,* F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

C.19. Test Requirements. During each required compliance stack test, the permittee shall operate a tested LFG engine at permitted capacity (90% to 100% of 2,242 bhp). The permittee shall notify the Compliance Authority in writing at least 15 days prior to any scheduled stack tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, *General Emissions Test Requirements,* F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

C.20. Test Methods. Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
7 or 7E	Determination of NOx Emissions from Stationary Sources
9	Visual Determination of the Opacity (VE) of Emissions from Stationary Sources
10	Determination of CO Emissions from Stationary Sources *{Note: The method shall be based on a continuous sampling train.}*
19	Determination of SO_2 Removal Efficiency and PM, SO_2, and NOx Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography
25A	Method for Determining Gaseous Organic Concentrations (Flame Ionization)
25C	Method for Determining NMOC in Landfill Gases
TECO-55I	ALT-096 Direct total Non-Methane Hydrocarbon Analyzer

The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800(9)(b)7 *Compliance and Performance Testing*, F.A.C; and, Appendix A of 40 CFR 60; and Permit 0970079-013-AC/PSD-FL-429A]

Recordkeeping and Reporting Requirements

C.21. Monthly Records. Within ten (10) business days following each month, the permittee shall observe and record the following information in a written log or electronic format accessible to the Department:

a. number of hours of operation of each engine;

b. total monthly LFG flow rate to each engine; and

c. total SO_2 emissions for the month and previous 12-consecutive month period, for a rolling 12-month total.

Emissions of SO_2 shall be calculated from the monthly LFG consumption as well as the analytical results for the sulfur contents of the LFG representative of the given month of operation based on the semi-annual sampling for that period. [Rules 62-4.160(2) and 62-212.400(12), *Source Obligation - escape-PSD*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

C.22. Gas Flow Meter Report. An annual report shall be submitted including the following data:

a. Fuel flow rate of the LFG and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by LFG is equivalent to 10% or more of the total fuel consumption on an annual basis.

b. The operating limits provided in your federally enforceable permit, and any deviations from these limits.

c. Any problems or errors suspected with the meters.

[40 CFR 63.6650(g) and Table 7; and Permit 0970079-013-AC/PSD-FL-429A]

C.23. Annual Reporting in AOR. The total SO_2 emissions from all of the engines (combined) shall be reported in the AOR, along with the total LFG consumption for all of the engines (combined). The sulfur content shall also be included with the AOR. [Rules 62-4.160(2) and 62-212.400(12), *Source Obligation - escape-PSD*, F.A.C.; and Permit 0970079-013-AC/PSD-FL-429A]

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

EU No.	Brief Description
008	SKAGEN F1200 Hybrid Leachate Evaporator System

This EU is a hybrid leachate evaporator system, used to support in the management of collected leachate from the landfill, and consists of two evaporators and a VOC and ammonia stripper column. Evaporator Tank 1 is a 30,000 gpd landfill gas-fired leachate evaporation tank that uses heat from an enclosed landfill gas-fired combustor with a maximum heat input rating of 13.83 MMBtu/hr (HHV), equivalent to combusting 439 standard cubic feet per minute (scfm) of landfill gas with heating value of 525 Btu/scf (HHV). The enclosed combustor for Tank 1 can also use compressed natural gas (CNG) as an alternative fuel to landfill gas for Tank 1. Evaporator tank 2 is a 22,000 gpd engine exhaust gas driven leachate evaporation tank, that uses the hot exhaust gases from three of the landfill-gas fired CAT G3520C engines (EU 006).

{Permitting Note: This emission unit is regulated pursuant to 40 CFR 60 Subpart A – General Provisions, adopted and incorporated by reference in Rule 62-204.800(8)(c), F.A.C.; and 40 CFR 60, Subpart XXX – Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014, adopted and incorporated by reference in Rule 62-204.800(8)(b)78, F.A.C.}.

Essential Potential to Emit (PTE) Parameters

D.1. Permitted Capacity.

a. *Evaporator Tank 1*. The maximum amount of leachate to be evaporated in this evaporator shall not exceed 30,000 gallons per day, averaged on a quarterly basis.

b. *Enclosed Combustor for Evaporator Tank 1*. The maximum landfill gas flowrate to the leachate evaporator shall not exceed 439 scfm, averaged on an hourly basis; or the maximum CNG flowrate to the evaporator shall not exceed 226 scfm, averaged on an hourly basis.

c. *Evaporation Tank 2*. The maximum amount of leachate to be evaporated in this evaporator shall not exceed 22,000 gallons per day, averaged on a quarterly basis.

[Rule 62-210.200(PTE), F.A.C.; and Permit No. 0970079-018-AC, Specific Condition 3.A.2.]

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

D.3. Enclosed Combustor for Evaporator Tank 1 Authorized Fuel: The only authorized fuels to be burned are landfill gas or CNG. [Rule 62-210.200(PTE), F.A.C.; and Permit No. 0970079-018-AC, Specific Condition 3.A.3.]

D.4. Hours of Operation. The hours of operation are not limited (8,760 hours/year). [Rule 62-210.200(PTE), F.A.C.; and Permit No. 0970079-014-AC, Specific Condition 3.A.4.]

Emission Limitations and Standards

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

D.5. Emissions Standard (Enclosed Combustor for Evaporator Tank 1). Non-Methane Organic Compounds (NMOC) emissions must either be reduced by 98 weight percent or the outlet NMOC concentration must be reduced to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. [40 CFR 60.762(b)(2)iii.B; and Permit No. 0970079-014-AC, Specific Condition 3.A.6.]

Monitoring of Operations

D.6. Monitoring of Operations (Enclosed Combustor for Evaporator Tank 1). The permittee must calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment:

a. A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 degrees Celsius, whichever is greater.

b. A device that records flow to the control device and bypass of the control device (if applicable). The owner or operator must:

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

(2) 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 must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

[40 CFR 60.766(b); and Permit No. 0970079-014-AC, Specific Condition 3.A.13.]

D.7. Monitoring of Operations (Evaporator Tanks 1 and 2). The evaporators shall be operated in accordance with manufacturer recommended procedures and conduct regular inspections to ensure optimum operation of the units. [Rule 62-4.070(3), F.A.C.; and Permit No. 0970079-014-AC, Specific Condition 3.A.14.]

D.8. Monitoring Requirements (Enclosed Combustor for Evaporator Tank 1). The monitoring requirements apply at all times the affected source is operating, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable. [40 CFR 766(h); and Permit No. 0970079-014-AC, Specific Condition 3.A.15.]

Test Methods and Procedures

D.9. Test Methods. When required, tests shall be performed in accordance with the following reference methods:

Method	Description of Method and Comments
3	Gas Analysis for the Determination of Dry Molecular Weight
3A	Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources (instrumental Analyzer Procedure)
3C	Determination of Carbon Dioxide, Methane, Nitrogen, and Oxygen from Stationary Sources
25	Determination of Total Gaseous Nonmethane Organic Emissions as Carbon
25A	Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer (may be used in cases where the outlet concentration is less than 50 ppm NMOC as carbon or 8 ppm as hexane)
25C	Determination of Nonmethane Organic Compounds in MSW Landfill Gases (may be used at the inlet only)
201A	Determination of PM_{10} And $PM_{2.5}$ Emissions from Stationary Sources

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rule 62-204.800, F.A.C.; and Permit No. 0970079-014-AC, Specific Condition 3.A.12.]

D.10. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

{Permitting Note: Air compliance test notifications can now be completed online in the Department's Business Portal. To access this online process, go to http://www.fldepportal.com/go/home and sign in (or register if you're a new user) from the link in the upper right corner of the page. On the Welcome page select the Submit option, then select Registration/Notification, and then click on Air Compliance Test Notifications. Once in the process, just carefully read the instructions on each screen (and under the Help tabs) to complete the notification.}

D.11. Annual Compliance Tests. During each calendar year (January 1st to December 31st), the combustor for Evaporator Tank 1 shall be tested to demonstrate that it continues to meet the NMOC emissions standard in Specific Condition **D.5**. [Rule 62-297.310(8)(a)1, F.A.C.; and Permit No. 0970079-014-AC, Specific Condition 3.A.9.]

{Permitting Note: The annual compliance tests are only required when using landfill gas as a fuel source in Evaporator Tank 1.}

D.12. Test Procedures. For the performance tests required in Specific Condition **D.11.** Method 25 or 25C (Method 25C may be used at the inlet only) of appendix A of 40 CFR part 60 must be used to determine compliance with the 98 weight-percent efficiency or the 20 parts per million by volume outlet concentration level, unless another method to demonstrate compliance has been approved by the Department as provided by 40 CFR 60.767(c)(2). Method 3, 3A, or 3C must be used to determine oxygen for correcting the NMOC concentration as hexane to 3 percent. In cases where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), Method 25A should be used in place of Method 25. Method 18 may be used in conjunction with Method 25A on a limited basis (compound specific, *e.g.,* methane) or Method 3C may be used to determine methane. The methane as carbon should be subtracted from the Method 25A total hydrocarbon value as carbon to give NMOC concentration as carbon. The permittee must divide the NMOC concentration as carbon by 6 to convert from the CNMOC as carbon to CNMOC as hexane. Equation 4 must be used to calculate efficiency:

$$\text{Control Efficiency} = (NMOC_{in} - NMOC_{out}) / (NMOC_{in}) \qquad \text{Eq. 4}$$

Where:
$NMOC_{in}$ = Mass of NMOC entering control device.
$NMOC_{out}$ = Mass of NMOC exiting control device.

[40 CFR 60.764(d); and, Permit No. 0970079-014-AC, Specific Condition 3.A.10.]

Recordkeeping and Reporting Requirements

D.13. Performance Test Recordkeeping Requirements (Enclosed Combustor for Evaporator Tank 1). The permittee must keep up-to-date, readily accessible records for the life of the control system equipment of the data listed below as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring must be maintained for a minimum of 5 years. Records of the control device vendor specifications must be maintained until removal.

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

b. The percent reduction of NMOC determined as specified in 40 CFR60.762(b)(2)(iii)(B).

[40 CFR 60.768(b)(2); and Permit No. 0970079-014-AC, Specific Condition 3.A.17.]

D.14. Operating Parameter Recordkeeping Requirements (Enclosed Combustor for Evaporator Tank 1). The permittee must keep for 5 years up-to-date, readily accessible continuous records of the equipment operating

parameters specified to be monitored in 40 CFR 60.766 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.

a. The following constitute exceedances that must be recorded and reported under 40 CFR 60.767(g): For enclosed combustors, all 3-hour periods of operation during which the average temperature was more than 28 degrees Celsius (82 degrees Fahrenheit) below the average combustion temperature during the most recent performance test at which compliance with 40 CFR 60.762(b)(2)(iii) was determined.

b. Keep up-to-date, readily accessible continuous records of the indication of flow to the control system (enclosed combustor) and the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40 CFR 60.766.

[40 CFR 60.768(c); and Permit No. 0970079-014-AC, Specific Condition 3.A.18.]

D.15. Operating Rate Recordkeeping Requirements (Evaporator Tanks 1 and 2). The permittee must maintain records of leachate throughput to each evaporator recorded daily and averaged quarterly and make them available for inspection by the Department. [Rule 62-4.070(3), F.A.C.; and Permit No. 0970079-014-AC, Specific Condition 3.A.19.]

D.16. Fuel Records. The permittee shall maintain records of each type and quantity of fuel sent to the enclosed combustor for Evaporation Tank 1 to demonstrate compliance with Specific Condition **D.1.b.** [Rule 62-4.070(3), F.A.C.; and Permit No. 0970079-018-AC, Specific Condition 3.A.4.]

D.17. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

Other Requirements

D.18. Operational Standard. The Evaporator Tank 1 shall be in operation at all times when the collected gas is routed to its enclosed combustor. [40 CFR 60.763(f); and Permit No. 0970079-014-AC, Specific Condition 3.A.5.]

D.19. Operation and Maintenance. This emission unit shall follow the operation and maintenance procedure given in Appendix OMP. [Rule 62-4.070(3), F.A.C.]

D.20. Startup and Shutdown Procedures. This emission unit shall startup and shut down following the procedures given in Appendix SS. [Rule 62-4.070(3), F.A.C.]

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

EU No.	Brief Description
009	Emergency Stationary Spark Ignition (SI) Reciprocating Internal Combustion Engine (RICE)

This emissions unit is comprised of one "existing", emergency stationary Spark Ignition (SI) RICE, Generac Model Number 5079620200 (Type SG135), propane fired emergency generator, rated at 135 kilowatts.

{Permitting Notes: This emergency-use (SI) RICE is regulated under 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) adopted in Rule 62.204.800(11)(b), F.A.C. This permit section addresses an "existing" stationary RICE less than or equal to 500 HP, located at a major source of HAP, that commenced construction before 6/12/2006, and that has not been modified or reconstructed after this date. Therefore, the engine is not subject to NSPS 40 CFR 60, Subpart JJJJ. This emissions unit operates only as an emergency engine as defined in NESHAP Subpart ZZZZ and does not operate for purposes of emergency demand response or to regulate voltage or frequency deviation as specified in §63.6640(f)(2)(ii) and (iii).}

Essential Potential to Emit (PTE) Parameters

E.1. Restricted Hours of Operation. The following limitations apply:

a. *Emergency Situations*. There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 63.6640(f)(1)]

b. *Other Situations*. The permittee may operate this emergency stationary RICE the purposes specified in paragraph b.(1) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph **c**. counts as part of the 100 hours per calendar year allowed by this paragraph.

(1) Maintenance and Testing. This engine is authorized to operate for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. [40 CFR 63.6640(f)(2)(i)]

c. *Non-emergency Situations*. This engine may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph **b**., above. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 63.6640(f)(3)]

E.2. Work or Management Practice Standards.

a. *Oil*. Change oil and filter every 500 hours of operation or annually, whichever comes first. [40 CFR 63.6602 & Table 2c.6.a.]

b. *Spark Plugs*. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63.6602 & Table 2c.6.b.]

c. *Hoses and Belts*. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63.6602 & Table 2c.6.c.]

d. *Operation and Maintenance*. Operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions or develop and follow your own maintenance plan which must provide, to the extent practicable for the maintenance and operation of the engine in a

manner consistent with good air pollution, control practice for minimizing emissions. [40 CFR 63.6625(e), 63.6640(a) & Table 6.9.a.]

e. *Engine Startup*. During periods of startup the owner or operator must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63.6625(h)]

f. *Oil Analysis*. The owner or operator has the option of utilizing an oil analysis program in order to extend the oil change requirement. The oil analysis must be performed at the same frequency specified for changing the oil in paragraph **a**., above. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the permittee is not required to change the oil. If any of the limits are exceeded, the permittee must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee must change the oil within 2 business days or before commencing operation, whichever is later. The permittee must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63.6625 (j) and Table 2c, footnote 2]

g. *Alternative Work Practices*. Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices. [40 CFR 63, Subpart ZZZZ, Table 2c, footnote 3]

Monitoring of Operations

E.3. Hour Meter. The permittee must install a non-resettable hour meter if one is not already installed. [40 CFR 63.6625(f)]

Compliance Requirements

E.4. Continuous Compliance. Each unit shall be in compliance with the emission limitations and operating standards in this section at all times. [40 CFR 63.6605(a)]

E.5. Operation and Maintenance of Equipment. At all times the permittee must operate and maintain, any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the compliance authority which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6605(b)]

Reporting Requirements

E.6. Delay of Performing Work Practice Requirements. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Specific Condition **E.2**, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable. [40 CFR 63, Subpart ZZZZ, Table 2c, footnote 1]

E.7. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), E.A.C.]

Recordkeeping Requirements

E.8. Notification, Performance and Compliance Records. The permittee must keep:

a. A copy of each notification and report that the permittee submitted to comply with this section, including all documentation supporting any Initial Notification or Notification of Compliance Status that the permittee submitted. [40 CFR 63.6655(a)(1)]

b. Records of the occurrence and duration of each malfunction of operation. [40 CFR 63.6655(a)(2)]

c. Records of all required maintenance performed on the hour meter. [40 CFR 63.6655(a)(4)]

d. Records of actions taken during periods of malfunction to minimize emissions in accordance with Specific Condition **E.5**, including corrective actions to restore malfunctioning process and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)(5)]

e. Records of the Work or Management Practice Standards specified in Specific Condition **E.2**. [40 CFR 63.6655(d)]

f. Records of the maintenance conducted in order to demonstrate that the RICE was operated and maintained according to permittee's maintenance plan. [40 CFR 63.6655(e)]

g. Records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation including what classified the operation as emergency and how many hours are spent for non-emergency operation. [40 CFR 63.6655(f)]

E.9. Record Retention.

a. The permittee must keep records in a suitable and readily available form for expeditious reviews.

b. The permittee must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record.

[40 CFR 63.6660 and 40 CFR 63.10(b)(1)]

General Provisions

E.10. 40 CFR 63 Subpart A - General Provisions. The owner or operator shall comply with the following applicable requirements of 40 CFR 63, Subpart A - General Provisions, which have been adopted by reference in Rule 62-204.800(11)(d)1., F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 63.5(e), 40 CFR 63.5(f), 40 CFR 63.6(g), 40 CFR 63.6(h)(9), 40 CFR 63.6(j), 40 CFR 63.13, and 40 CFR 63.14. Link to 40 CFR 63, Subpart A - General Provisions

General Provisions Citation	Subject of Citation
§63.1	General applicability of the General Provisions
§63.2	Definitions (additional terms defined in 43 CFR 63.6675)
§63.3	Units and abbreviations
§63.4	Prohibited activities and circumvention
§63.5	Construction and reconstruction
§63.6(a)	Applicability
§ 63.6(c)(1)-(2)	Compliance dates for existing sources
§63.9(a)	Applicability and State delegation of notification requirements
§63.9(b)(1)-(5)	Initial notifications (except that §63.9(b)(3) is reserved)
§63.9(i)	Adjustment of submittal deadlines
§63.9(j)	Change in previous information
§63.10(a)	Administrative provisions for recordkeeping/reporting
§63.10(b)(1)	Record retention
§63.10(b)(2)(vi)–(xi)	Records

General Provisions Citation	Subject of Citation
§63.10(b)(2)(xii)	Record when under waiver
§63.10(b)(2)(xiv)	Records of supporting documentation
§63.10(b)(3)	Records of applicability determination
§63.10(d)(1)	General reporting requirements
§63.10(f)	Waiver for recordkeeping/reporting
§63.12	State authority and delegations
§63.13	Addresses
§63.14	Incorporation by reference
§63.15	Availability of information

[40 CFR 63.6645(a), 63.6665 & Table 8 to Subpart ZZZZ of Part 63]

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