COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY PROGRAM

PLAN APPROVAL

Issue Date: January 3, 2022 Effective Date: January 3, 2022

Expiration Date: January 1, 2024

In accordance with the provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and 25 Pa. Code Chapter 127, the Owner, [and Operator if noted] (hereinafter referred to as permittee) identified below is authorized by the Department of Environmental Protection (Department) to construct, install, modify or reactivate the air emission source(s) more fully described in the site inventory list. This Facility is subject to all terms and conditions specified in this plan approval. Nothing in this plan approval relieves the permittee from its obligations to comply with all applicable Federal, State and Local laws and regulations.

The regulatory or statutory authority for each plan approval condition is set forth in brackets. All terms and conditions in this permit are federally enforceable unless otherwise designated as "State-Only" requirements.

Plan Approval No. 35-00014A

Federal Tax Id - Plant Code: 23-2637846-1

Owner Information

Name: KEYSTONE SANI LDFL INC
Mailing Address: 249 DUNHAM DR
DUNMORE, PA 18512-2686

Plant Information

Plant: KEYSTONE SANI LDFL INC/DUNMORE
Location: 35 Lackawanna County 35003 Dunmore Borough
SIC Code: 4953 Trans. & Utilities - Refuse Systems

Responsible Official

Name: DOMINICK DENAPLES
Title: SITE MGR
Phone: (570) 343 - 5782 Email: dominickd@kslco.com

Plan Approval Contact Person

Name: DOMINICK DENAPLES
Title: SITE MGR
Phone: (570) 343 - 5782 Email: dominickd@kslco.com

[Signature] Mark J Wejkszner

MARK J. WEJKSZNER, NORTHEAST REGION AIR PROGRAM MANAGER

Plan Approval Description

This Plan Approval is being issued for the Phase III expansion at the Keystone Sanitary Landfill, Inc. (Keystone Landfill or Keystone) located in Dunmore and Throop Boroughs, Lackawanna County. The facility is permitted to accept 7,250 average tons per day (AVG TPD) of municipal solid waste (MSW). The proposed expansion will provide additional airspace by landfilling waste in the valley between the inactive Phase I area and the active Phase II area. The entire phase III expansion project is contained within the current permitted boundary. This is a modification of the existing permit. No new controls are being installed.

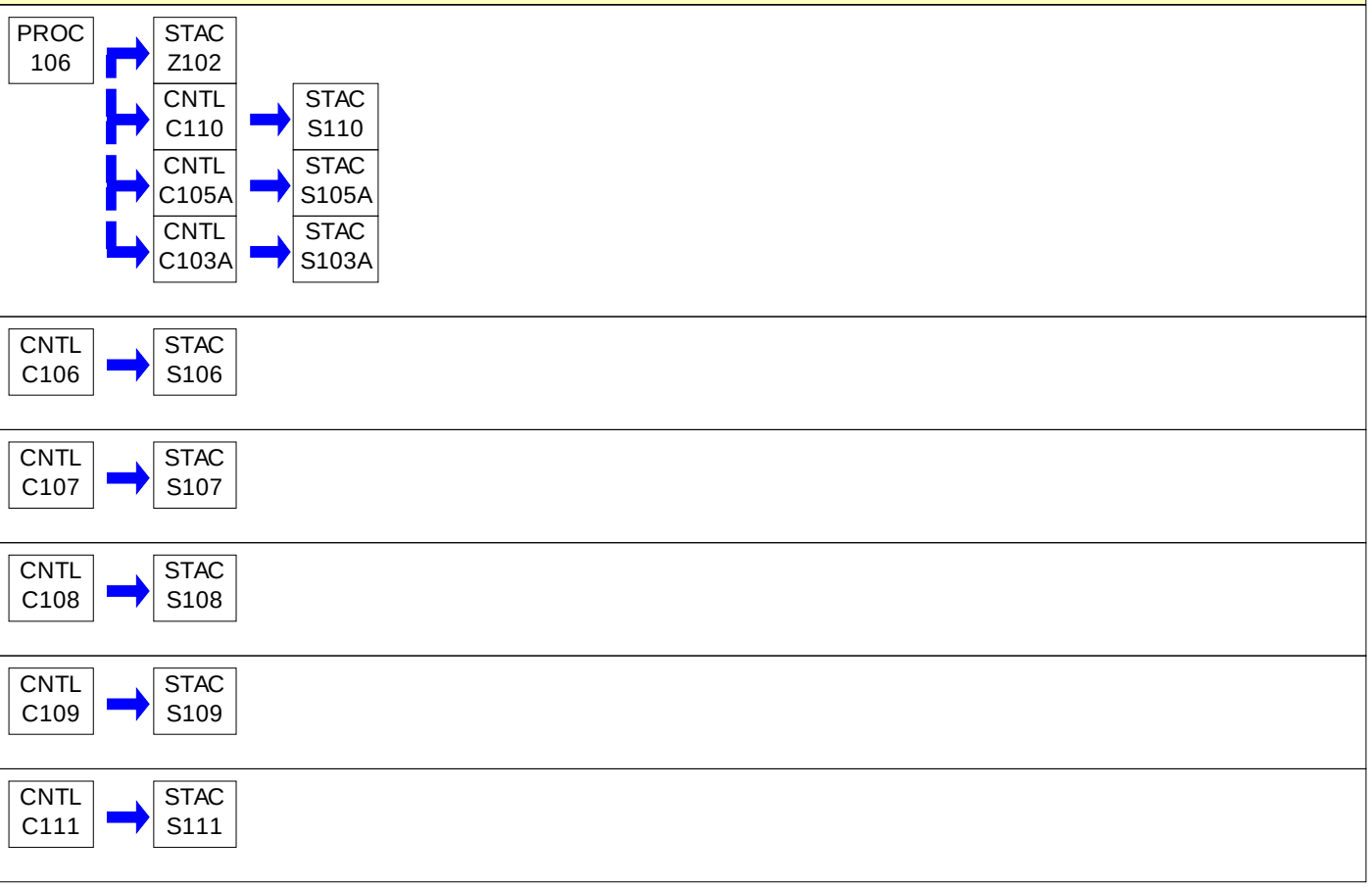
SECTION A. Table of Contents

SECTION A. Table of Contents

SECTION A. Plan Approval Inventory List

Source ID	Source Name	Capacity/Throughput	Fuel/Material
106	LANDFILL PHASE 3 (GAS COLLECTION SYSTEM)		
C103A	ENCLOSED FLARE 2 (6000 CFM)		
C105A	ENCLOSED FLARE 3 (6000 CFM)		
C106	FLARE - ENCLOSED PORTABLE (800 CFM)		
C107	FLARE - PORTABLE CANDLE #1 (500 CFM)		
C108	FLARE - PORTABLE CANDLE #2 (500 CFM)		
C109	FLARE - PORTABLE CANDLE #3 (500 CFM)		
C110	FLARE - ENCLOSED (5000 CFM)		
C111	FLARE - ENCLOSED (4000 CFM) PORTABLE		
S103A	FLARE 2 STACK		
S105A	FLARE 3 STACK		
S106	STACK - FLARE C106		
S107	STACK - FLARE C107		
S108	STACK - FLARE C108		
S109	STACK - FLARE C109		
S110	STACK - FLARE C110		
S111	STACK - FLARE C111		
Z102	FUGITIVE LANDFILL EMISSIONS		

PERMIT MAPS



SECTION B. General Plan Approval Requirements

#001 [25 Pa. Code § 121.1]

Definitions

Words and terms that are not otherwise defined in this plan approval shall have the meanings set forth in Section 3 of the Air Pollution Control Act (35 P.S. § 4003) and 25 Pa. Code § 121.1.

#002 [25 Pa. Code § 127.12b (a) (b)]

Future Adoption of Requirements

The issuance of this plan approval does not prevent the future adoption by the Department of any rules, regulations or standards, or the issuance of orders necessary to comply with the requirements of the Federal Clean Air Act or the Pennsylvania Air Pollution Control Act, or to achieve or maintain ambient air quality standards. The issuance of this plan approval shall not be construed to limit the Department's enforcement authority.

#003 [25 Pa. Code § 127.12b]

Plan Approval Temporary Operation

This plan approval authorizes temporary operation of the source(s) covered by this plan approval provided the following conditions are met.

(a) When construction, installation, modification, or reactivation is being conducted, the permittee shall provide written notice to the Department of the completion of the activity approved by this plan approval and the permittee's intent to commence operation at least five (5) working days prior to the completion of said activity. The notice shall state when the activity will be completed and when the permittee expects to commence operation. When the activity involves multiple sources on different time schedules, notice is required for the commencement of operation of each source.

(b) Pursuant to 25 Pa. Code § 127.12b (d), temporary operation of the source(s) is authorized to facilitate the shakedown of sources and air cleaning devices, to permit operations pending the issuance of a permit under 25 Pa. Code Chapter 127, Subchapter F (relating to operating permits) or Subchapter G (relating to Title V operating permits) or to permit the evaluation of the air contaminant aspects of the source.

(c) This plan approval authorizes a temporary operation period not to exceed 180 days from the date of commencement of operation, provided the Department receives notice from the permittee pursuant to paragraph (a), above.

(d) The permittee may request an extension of the 180-day shakedown period if further evaluation of the air contamination aspects of the source(s) is necessary. The request for an extension shall be submitted, in writing, to the Department at least 15 days prior to the end of the initial 180-day shakedown period and shall provide a description of the compliance status of the source, a detailed schedule for establishing compliance, and the reasons compliance has not been established. This temporary operation period will be valid for a limited time and may be extended for additional limited periods, each not to exceed 180 days.

(e) The notice submitted by the permittee pursuant to subpart (a) above, prior to the expiration of the plan approval, shall modify the plan approval expiration date on Page 1 of this plan approval. The new plan approval expiration date shall be 180 days from the date of commencement of operation.

#004 [25 Pa. Code § 127.12(a) (10)]

Content of Applications

The permittee shall maintain and operate the sources and associated air cleaning devices in accordance with good engineering practice as described in the plan approval application submitted to the Department.

#005 [25 Pa. Code §§ 127.12(c) and (d) & 35 P.S. § 4013.2]

Public Records and Confidential Information

(a) The records, reports or information obtained by the Department or referred to at public hearings shall be available to the public, except as provided in paragraph (b) of this condition.

(b) Upon cause shown by the permittee that the records, reports or information, or a particular portion thereof, but not emission data, to which the Department has access under the act, if made public, would divulge production or sales figures or methods, processes or production unique to that person or would otherwise tend to affect adversely the

SECTION B. General Plan Approval Requirements

competitive position of that person by revealing trade secrets, including intellectual property rights, the Department will consider the record, report or information, or particular portion thereof confidential in the administration of the act. The Department will implement this section consistent with sections 112(d) and 114(c) of the Clean Air Act (42 U.S.C.A. § § 7412(d) and 7414(c)). Nothing in this section prevents disclosure of the report, record or information to Federal, State or local representatives as necessary for purposes of administration of Federal, State or local air pollution control laws, or when relevant in a proceeding under the act.

#006 [25 Pa. Code § 127.12b]

Plan Approval terms and conditions.

[Additional authority for this condition is derived from 25 Pa. Code Section 127.13]

(a) This plan approval will be valid for a limited time, as specified by the expiration date contained on Page 1 of this plan approval. Except as provided in § § 127.11a and 127.215 (relating to reactivation of sources; and reactivation), at the end of the time, if the construction, modification, reactivation or installation has not been completed, a new plan approval application or an extension of the previous approval will be required.

(b) If construction has commenced, but cannot be completed before the expiration of this plan approval, an extension of the plan approval must be obtained to continue construction. To allow adequate time for departmental action, a request for the extension shall be postmarked at least thirty (30) days prior to the expiration date. The request for an extension shall include the following:

(i) A justification for the extension,
(ii) A schedule for the completion of the construction

If construction has not commenced before the expiration of this plan approval, then a new plan approval application must be submitted and approval obtained before construction can commence.

(c) If the construction, modification or installation is not commenced within 18 months of the issuance of this plan approval or if there is more than an 18-month lapse in construction, modification or installation, a new plan approval application that meets the requirements of 25 Pa. Code Chapter 127, Subchapter B (related to plan approval requirements), Subchapter D (related to prevention of significant deterioration of air quality), and Subchapter E (related to new source review) shall be submitted. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified.

#007 [25 Pa. Code § 127.32]

Transfer of Plan Approvals

(a) This plan approval may not be transferred from one person to another except when a change of ownership is demonstrated to the satisfaction of the Department and the Department approves the transfer of the plan approval in writing.

(b) Section 127.12a (relating to compliance review) applies to a request for transfer of a plan approval. A compliance review form shall accompany the request.

(c) This plan approval is valid only for the specific source and the specific location of the source as described in the application.

#008 [25 Pa. Code § 127.12(4) & 35 P.S. § 4008 & § 114 of the CAA]

Inspection and Entry

(a) Pursuant to 35 P.S. § 4008, no person shall hinder, obstruct, prevent or interfere with the Department or its personnel in the performance of any duty authorized under the Air Pollution Control Act.

(b) The permittee shall also allow the Department to have access at reasonable times to said sources and associated air cleaning devices with such measuring and recording equipment, including equipment recording visual observations, as the Department deems necessary and proper for performing its duties and for the effective enforcement of the Air Pollution Control Act and regulations adopted under the act.

SECTION B. General Plan Approval Requirements

(c) Nothing in this plan approval condition shall limit the ability of the Environmental Protection Agency to inspect or enter the premises of the permittee in accordance with Section 114 or other applicable provisions of the Clean Air Act.

#009 [25 Pa. Code 127.13a]

Plan Approval Changes for Cause

This plan approval may be terminated, modified, suspended or revoked and reissued if one or more of the following applies:

(a) The permittee constructs or operates the source subject to the plan approval in violation of the act, the Clean Air Act, the regulations promulgated under the act or the Clean Air Act, a plan approval or permit or in a manner that causes air pollution.

(b) The permittee fails to properly or adequately maintain or repair an air pollution control device or equipment attached to or otherwise made a part of the source.

(c) The permittee fails to submit a report required by this plan approval.

(d) The Environmental Protection Agency determines that this plan approval is not in compliance with the Clean Air Act or the regulations thereunder.

#010 [25 Pa. Code §§ 121.9 & 127.216]

Circumvention

(a) The permittee, or any other person, may not circumvent the new source review requirements of 25 Pa. Code Chapter 127, Subchapter E by causing or allowing a pattern of ownership or development, including the phasing, staging, delaying or engaging in incremental construction, over a geographic area of a facility which, except for the pattern of ownership or development, would otherwise require a permit or submission of a plan approval application.

(b) No person may permit the use of a device, stack height which exceeds good engineering practice stack height, dispersion technique or other technique which, without resulting in reduction of the total amount of air contaminants emitted, conceals or dilutes an emission of air contaminants which would otherwise be in violation of this plan approval, the Air Pollution Control Act or the regulations promulgated thereunder, except that with prior approval of the Department, the device or technique may be used for control of malodors.

#011 [25 Pa. Code § 127.12c]

Submissions

Reports, test data, monitoring data, notifications shall be submitted to the:

Regional Air Program Manager
PA Department of Environmental Protection
(At the address given on the plan approval transmittal letter or otherwise notified)

#012 [25 Pa. Code § 127.12(9) & 40 CFR Part 68]

Risk Management

(a) If required by Section 112(r) of the Clean Air Act, the permittee shall develop and implement an accidental release program consistent with requirements of the Clean Air Act, 40 CFR Part 68 (relating to chemical accident prevention provisions) and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act (P.L. 106-40).

(b) The permittee shall prepare and implement a Risk Management Plan (RMP) which meets the requirements of Section 112(r) of the Clean Air Act, 40 CFR Part 68 and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act when a regulated substance listed in 40 CFR § 68.130 is present in a process in more than the listed threshold quantity at the facility. The permittee shall submit the RMP to the Environmental Protection Agency according to the following schedule and requirements:

(1) The permittee shall submit the first RMP to a central point specified by the Environmental Protection Agency no later than the latest of the following:

SECTION B. General Plan Approval Requirements

(i) Three years after the date on which a regulated substance is first listed under § 68.130; or,
(ii) The date on which a regulated substance is first present above a threshold quantity in a process.

(2) The permittee shall submit any additional relevant information requested by the Department or the Environmental Protection Agency concerning the RMP and shall make subsequent submissions of RMPs in accordance with 40 CFR § 68.190.

(3) The permittee shall certify that the RMP is accurate and complete in accordance with the requirements of 40 CFR Part 68, including a checklist addressing the required elements of a complete RMP.

(c) As used in this plan approval condition, the term "process" shall be as defined in 40 CFR § 68.3. The term "process" means any activity involving a regulated substance including any use, storage, manufacturing, handling, or on-site movement of such substances or any combination of these activities. For purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process.

#013 [25 Pa. Code § 127.25]

Compliance Requirement

A person may not cause or permit the operation of a source subject to § 127.11 (relating to plan approval requirements), unless the source and air cleaning devices identified in the application for the plan approval and the plan approval issued to the source, are operated and maintained in accordance with specifications in the application and conditions in the plan approval issued by the Department. A person may not cause or permit the operation of an air contamination source subject to this chapter in a manner inconsistent with good operating practices.

SECTION C. Site Level Plan Approval Requirements

I. RESTRICTIONS.

Emission Restriction(s).

 # 001 [25 Pa. Code §123.1]

Prohibition of certain fugitive emissions

The permittee may not permit the emission into the outdoor atmosphere of a fugitive air contaminant from a source other than the following:

(a) Construction or demolition of buildings or structures.
(b) Grading, paving and maintenance of roads and streets.
(c) Use of roads and streets. Emissions from material in or on trucks, railroad cars and other vehicular equipment are not considered as emissions from use of roads and streets.
(d) Clearing of land.
(e) Stockpiling of materials.
(f) Open burning operations.
(g) Sources and classes of sources other than those identified in paragraphs (a)-(f), for which the operator has obtained a determination from the Department that fugitive emissions from the source, after appropriate control, meet the following requirements:

(1) the emissions are of minor significance with respect to causing air pollution; and
(2) the emissions are not preventing or interfering with the attainment or maintenance of any ambient air quality standard.

 # 002 [25 Pa. Code §123.2]

Fugitive particulate matter

The permittee may not permit fugitive particulate matter to be emitted into the outdoor atmosphere from a source specified in Site Level Condition #001 (relating to prohibition of certain fugitive emissions) if such emissions are visible at the point the emissions pass outside the person's property.

 # 003 [25 Pa. Code §123.31]

Limitations

MALODOR EMISSIONS

The permittee may not permit the emission into the outdoor atmosphere of any malodorous air contaminants from any source in such a manner that the malodors are detectable outside the property of the person on whose land the source is being operated.

 # 004 [25 Pa. Code §123.41]

Limitations

VISIBLE EMISSIONS

(a) A person may not permit the emission into the outdoor atmosphere of visible air contaminants in such a manner that the opacity of the emission is either of the following:

(1) Equal to or greater than 20% for a period or periods aggregating more than three minutes in any 1 hour.
(2) Equal to or greater than 60% at any time.

(b) The limitations of section (a) shall not apply to a visible emission in any of the following instances:

(1) When the presence of uncombined water is the only reason for failure of the emission to meet the limitations.
(2) When the emission results from the operation of equipment used solely to train and test persons in observing the opacity of visible emission.
(3) When the emission results from sources specified in Site Level Condition #001 (relating to prohibition of certain fugitive emissions).

 # 005 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The VOC emissions from the facility must never equal to or exceed 50 TPY, based on a 12-month rolling sum.

SECTION C. Site Level Plan Approval Requirements

II. TESTING REQUIREMENTS.

 # 006 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Within 180 days after initial startup, or on an alternative schedule as approved by the Department, the permittee shall conduct EPA reference method stack testing in accordance with 25 Pa Code Chapter 139 and applicable EPA reference methods to quantify per- and polyfluoroalkyl substances (PFAS), which shall, at a minimum, include all of the target analytes in Table 45-1 of Other Test Method 45 (OTM-45), Revision 0, dated January 13, 2021. The applicant shall submit a protocol to the Department for approval within 60 days of plan approval issuance. [25 Pa. Code §127.12b]

 # 007 [25 Pa. Code §127.441]

Operating permit terms and conditions.

[Authority for this condition is also derived from 25 Pa. Code, Section 129.92]

(a) If requested by the Department, the permittee shall perform a stack test within the time frame specified by the Department.

(b) All performance tests shall be conducted in accordance with the Department's source testing procedurings described in the latest Source Testing Manual reference in 25 Pa. Code, Section 139.4(5).

III. MONITORING REQUIREMENTS.

 # 008 [25 Pa. Code §127.511]

Monitoring and related recordkeeping and reporting requirements.

The permittee shall conduct weekly inspections of the facility, during daylight hours when the facility is in operation, to detect visible and fugitive emissions.

IV. RECORDKEEPING REQUIREMENTS.

 # 009 [25 Pa. Code §127.511]

Monitoring and related recordkeeping and reporting requirements.

The permittee shall maintain a record of the dates and times the landfill is in operation.

 # 010 [25 Pa. Code §127.511]

Monitoring and related recordkeeping and reporting requirements.

FUGITIVE AND VISIBLE EMISSIONS

(a) The permittee shall, at the conclusion of each weekly inspection, record all occurrences of fugitive and visible emissions in a permanent logbook.
(b) The permittee shall record any and all corrective action(s) taken to eliminate the emission and all actions taken to prevent future occurances.

 # 011 [25 Pa. Code §127.511]

Monitoring and related recordkeeping and reporting requirements.

The permittee shall maintain up-to-date, readily accessible, on-site records of the maximum design capacity, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. These records shall be maintained for a minimum of 5 years.

V. REPORTING REQUIREMENTS.

 # 012 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The permittee, within one (1) hour of discovery of an occurrence, shall notify the Department (either by phone at (570) 826-2511 or e-mail (to the Regional Air Manager)) of any malfunction, recordkeeping or reporting errors, or other possible non-compliance issues, which reasonably is believed to either result in or possibly result in, or which results in, the emission of air contaminants in excess of the limitations specified in, or established pursuant to, any applicable rule or regulations contained in Article III of the Rules and Regulations of the Department of Environmental Protection. A written report shall be submitted to the Department within five working days following the initial notification describing the incident and the corrective actions taken or to be taken. The Department may take enforcement action for any violations of the applicable

SECTION C. Site Level Plan Approval Requirements

standards.

 # 013 [25 Pa. Code §127.441]

Operating permit terms and conditions.

The landfill is subject to Subpart XXX of the Standards of Performance for New Stationary Sources and 40 C.F.R. Part 63 Subpart AAAA of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), and shall comply with all applicable requirements of this Subpart. 40 CFR 60.4 requires submission of copies of all requests, reports, applications, submittals, and other communications to both EPA and the Department. The copies shall be forwarded to:

Associate Director
Office of Air Enforcement and Compliance Assistance 3AP20
1650 Arch Street
Philadelphia, PA 19103-2029

and

Air Quality Program Manager
Department of Environmental Protection
2 Public Square
Wilkes-Barre, PA 18701-1915

VI. WORK PRACTICE REQUIREMENTS.

 # 014 [25 Pa. Code §123.1]

Prohibition of certain fugitive emissions

The permittee shall take all reasonable actions to prevent particulate matter from becoming airborne. These actions shall include, but not be limited to, the following:

(a) Use, where possible, of water or chemicals for control of dust in the demolition of buildings or structures, construction operations, the grading of roads, or the clearing of land.
(b) Application of asphalt, oil, water or suitable chemicals on dirt roads, material stockpiles and other surfaces which may give rise to airborne dusts.
(c) Paving and maintenance of roadways.
(d) Prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

 # 015 [25 Pa. Code §127.441]

Operating permit terms and conditions.

[Authority for this condition is also derived from 25 Pa. Code, Section 129.92]

(a) The permittee shall ensure that the capture system and the control devices are in operation at all times.

 # 016 [25 Pa. Code §127.441]

Operating permit terms and conditions.

Landfill Fugitive Emission Control Criteria:

25 Pa. Code 123.1(c) requires the person responsible for sources with potential fugitive emissions to take all reasonable actions to prevent particulate matter from becoming airborne. 25 Pa. Code 273.217 requires landfill operators to implement fugitive dust control measures. This criteria specifies the reasonable actions that are necessary for the prevention of fugitive dust emissions from the operation of landfills in accordance with these requirements. Landfills which meet this criteria are
considered to be of minor significance with regards to particulate emissions and are not subject to Air Quality permitting requirements when no gas venting system is present.

SECTION C. Site Level Plan Approval Requirements

 # 017 [25 Pa. Code §127.441]

Operating permit terms and conditions.

Control of VOC emissions shall be accomplished through the operation and maintenance of an active gas collection system and the operation and maintenance of a landfill gas flare(s) having at least a 98% destruction efficiency or a 20 ppmvd outlet concentration (as hexane) at 3% oxygen for VOCs (where VOC is considered to be equal to NMOC).

 # 018 [25 Pa. Code §129.14]

Open burning operations

(a) Air basins. No person may permit the open burning of material in an air basin.

(b) Exceptions: The requirements of subsection (a) do not apply where the open burning operations result from:

(1) A fire set to prevent or abate a fire hazard, when approved by the Department and set by or under the supervision of a public officer.
(2) A fire set for the purpose of instructing personnel in fire fighting, when approved by the Department.
(3) A fire set for the prevention and control of disease or pests, when approved by the Department.
(4) A fire set in conjunction with the production of agricultural commodities in their mnmanufactured state on the premises of the farm operation.
(5) A fire set for the purpose of burning domestic refuse, when the fire is on the premises of a structure occupied solely as a dwelling by two families or less and when the refuse results from the normal occupancy of such structure.
(6) A fire set solely for recreational or ceremonial purposes.
(7) A fire set solely for cooking food.

(c) Clearing and grubbing wastes. The following is applicable to clearing and grubbing wastes:

(1) As used in this subsection the following terms shall have the following meanings:

Air curtain destructor -- A mechanical device which forcefully projects a curtain of air across a pit in which open burning is being conducted so that combustion efficiency is increased and smoke and other particulate matter are contained.

Clearing and grubbing wastes -- Trees, shrubs, and other native vegetation which are cleared from land during or prior to the process of construction. The term does not include demolition wastes and dirt laden roots.

(2) Subsection (a) notwithstanding, clearing and grubbing wastes may be burned in a basin subject to the following requirements:

(i) Air curtain destructors shall be used when burning clearing and grubbing wastes.
(ii) Each proposed use of air curtain destructors shall be reviewed and approved by the Department in writing with respect to equipment arrangement, design and existing environmental conditions prior to commencement of burning. Proposals approved under this subparagraph need not obtain plan approval or operating permits under 25 Pa. Code, Chapter 127 (relating to construction modification, reactivation and operation of sources).
(iii) Approval for use of an air curtain destructor at one site may be granted for a specified period not to exceed 3 months, but may be extended for additional limited periods upon further approval by the Department.
(iv) The Department reserves the right to rescind approval granted if a determination by the Department indicates that an air pollution problem exists.

(3) During an air pollution episode, open burning is limited by 25 Pa. Code, Chapter 137 (relating to air pollution episodes) and shall cease as specified in such chapter.

VII. ADDITIONAL REQUIREMENTS.

 # 019 [25 Pa. Code §127.511]

Monitoring and related recordkeeping and reporting requirements.

The facility is subject to all applicable requirements of 40 CFR Part 60, Subpart XXX, Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014

SECTION C. Site Level Plan Approval Requirements

 # 020 [25 Pa. Code §127.511]

Monitoring and related recordkeeping and reporting requirements.

The facility is subject to all applicable requirements of 40 CFR Part 63, Subpart AAAA, National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills.

VIII. COMPLIANCE CERTIFICATION.

No additional compliance certifications exist except as provided in other sections of this plan approval including Section B (relating to Plan Approval General Requirements).

IX. COMPLIANCE SCHEDULE.

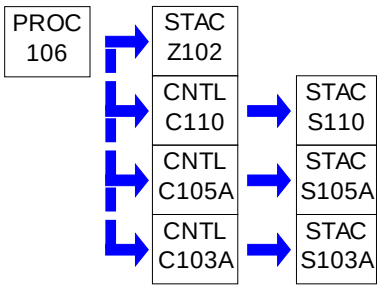
No compliance milestones exist.

SECTION D. Source Level Plan Approval Requirements

Source ID: 106 Source Name: LANDFILL PHASE 3 (GAS COLLECTION SYSTEM)

Source Capacity/Throughput:

Conditions for this source occur in the following groups: 08



I. RESTRICTIONS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

IV. RECORDKEEPING REQUIREMENTS.

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

SECTION E. Source Group Plan Approval Restrictions.

Group Name: 03

Group Description: Enclosed Flares

Sources included in this group

ID	Name
C103A	ENCLOSED FLARE 2 (6000 CFM)
C105A	ENCLOSED FLARE 3 (6000 CFM)
C106	FLARE - ENCLOSED PORTABLE (800 CFM)
C110	FLARE - ENCLOSED (5000 CFM)
C111	FLARE - ENCLOSED (4000 CFM) PORTABLE

I. RESTRICTIONS.

Emission Restriction(s).

 # 001 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Pursuant to the Best Available Control Technology provisions of 25 Pa. Code Section 127.12(a)(5) of Chapter 127 of the Rules and Regulations of the Department of Environmental Protection the following requirements are hereby established for each flare:

(1) Enclosed flare shall be designed such that there are no visible flames during normal operations.

(2) Enclosed flare shall be operated with no visible emissions, except for periods not to exceed a total of five minutes during any two consecutive hours.

(3) Enclosed flare shall maintain, for each 3-hour period of operation based on rolling hourly data, an average combustion temperature of no more than 28°C (50.4°F) below the average combustion temperature during the most recent performance test in which compliance with the destruction/removal was demonstrated. If there has been no performance test, then a minimum temperature of 1500°F (815.6°C) will be necessary.

(4) Enclosed flare may be operated at a lower temperature provided that the company has demonstrated, by a stack test, the flare will achieve the 98% destruction/removal efficiency or 20 ppmdv, measured as hexane and corrected to 3% oxygen, at the lower temperature and complies with all the emission limits established in the plan approval. If compliance has been demonstrated at the lower temperature, the owner or operator of the landfill is required to submit a plan approval application to make the lower operating temperature enforceable. Operation at the lower temperature can not occur until approved by the Department. Under no circumstance the flare(s) shall be operated with an operating temperature less than 1200°F.

(5) The enclosed flare shall be equipped with an automatic pilot ignition source using an auxiliary fuel (e.g. propane or natural gas).

(6) The enclosed flare shall be operated with a flame present at all times and equipped with an automatic shut-off mechanism designed to immediately stop the flow of gases when a flame-out occurs. During the restart or start-up, there shall be sufficient flow of auxiliary fuel to the burners such that unburned landfill gases are not emitted to the atmosphere.

(7) The flue gas temperature of the enclosed flare shall be measured and recorded in the combustion zone as per the manufacturer's specifications based on the flow into the flare. The temperature in the combustion zone shall be used to determine compliance with the minimum temperature requirement. The temperature monitoring device shall meet the 40 C.F.R. Section 60.766(b) requirements.

II. TESTING REQUIREMENTS.

 # 002 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

1. Source tests shall be conducted on each flare within 180 days after start-up. The Department reserves the right to require the owner to conduct further tests at any time after the initial compliance tests to demonstrate: (a) either the destruction/removal efficiency (DRE) of at least 98% (by weight) for total nonmethane organic compounds (NMOCs) or a reduction in the NMOC concentration of the gas at the flare exit to 20 PPM or less as hexane by volume, dry basis at 3 % O2; and (b) NOX (measured as NO2 as ppmvd). The Department reserves the right to require the owner or operator to conduct

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further tests at any time after the initial compliance tests.

2. All performance tests shall be conducted in accordance with 40 CFR §60.764 and the Department's source testing procedures described in the latest Source Testing Manual reference in 25 Pa Code Section 139.4(5). Test procedures are to be approved by the Department prior to the actual testing.

3. At least two weeks prior to the test, the Regional Air Quality Program Manager shall be informed of the date and time of the test.

4. At least sixty (60) days prior to the test required by condition No.1, a pre-test protocol shall be submitted to the Department for review.

5. Within sixty (60) days of the completion of the test required by condition No. 1, two copies of the complete test report, including all operating conditions, shall be submitted to the Regional Air Quality Program Manager.

III. MONITORING REQUIREMENTS.

 # 003 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The company shall install, calibrate and maintain a landfill gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes.

 # 004 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

(a) The permittee shall ensure that these control devices are equipped with all applicable monitoring equipment, and that such equipment is installed, calibrated, operated and maintained according to the vendor's specifications at all times that a control device is in use.

(b) The operating temperatures of the combustion system shall be continuously measured and recorded at least every 15 minutes.The temperature shall be monitored and maintained at the minimum temperature achieved during the performance test in which compliance with the DRE , or outlet concentration requirement was demonstrated.

(c) Within 30 minutes of start up of the combustion system (flare), the combustion systems must achieve combustion temperature of at least a minimum temperature achieved during the performance test in which compliance with the DRE, or outlet concentration requirement was demonstrated.

 # 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.766]

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Monitoring of operations.

The permittee shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment on each enclosed flare.

(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. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity equal to or greater than 44 megawatts.

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

(i) 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

(ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism 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.

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IV. RECORDKEEPING REQUIREMENTS.

 # 006 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

1. The company shall maintain a file containing all records and other data that are required to be collected pursuant to the various provisions of this operating permit. The file shall include, but not be limited to: all air pollution control systems performance evaluations and records of calibration checks, adjustments and maintenance performed on all equipment which is subject to this operating permit. All measurements, records and other data required to be maintained by the company shall be retained for at least five years following the date on which such measurements, records or data are recorded.

2. Temperature shall be recorded whenever the flare is in operation. The recording charts shall be made available to the Department personnel upon request. These records shall be maintained for a period of time not less than five years.

 # 007 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The operating temperature of each flare shall be recorded whenever the flare is in operation. The recording charts shall be made available to Department personnel upon request. All such records shall be maintained for a period of not less than five (5) years.

V. REPORTING REQUIREMENTS.

 # 008 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

1. Any changes in the process or control equipment would be consider a modification and would require the submittal of an amended application for plan approval in accordance with the provisions of 25 PA Code 127.11 and 127.12.

2. All flares are subject to Subpart XXX of the Standards of Performance for New Stationary Sources and shall comply with all applicable requirements thereof. 40 CFR Part 60.4 requires the submission of copies of all requests, report, applications, submittals, and other communications to both EPA and the Department. The EPA copies shall be forewarded to:

EPA Region III
Associate Director, Office of Air Enforcement and Compliance Assistance
1650 Arch Street
Philadelphia, PA, 19103.

VI. WORK PRACTICE REQUIREMENTS.

 # 009 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The enclosed flares incorporated in the landfill gas extraction, collection and control system associated with the solid waste disposal area shall meet the following criteria:

(a) Each flare shall be equipped with the necessary equipment to allow auxiliary fuel to be bled into the landfill gas to enhance its heat content.

(b) There shall be sufficient flow of auxiliary fuel during system start-up or re-start such that a flame is supported and unburnt gases are not emitted to the atmosphere.

(c) The temperature sensor associated with the continuous temperature monitor shall be positioned so that it will indicate the temperature of the gases. The records will be kept on file for at least five years and will be made available to the Department upon request.

(d) In the event that a flare is operating at less than 1500 degree Fahrenheit, an automatic shut-off device shall immediately stop the flow of landfill gas to the flare and the flare shall be automatically shut down while sounding an alarm.

(e) The flares shall, at any given point in time, be capable of accommodating the maximum gas collection rate which will exist at that point in time while maintaining compliance with the limitations and requirements specified in, or established pursuant to, all applicable rules and regulations contained in Article III of the Rules and Regulations of the Department of Environmental Protection as well as compliance with all conditions contained herein.

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VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

SECTION E. Source Group Plan Approval Restrictions.

Group Name: 04

Group Description: Portable Candle Flares

Sources included in this group

ID	Name
C107	FLARE - PORTABLE CANDLE #1 (500 CFM)
C108	FLARE - PORTABLE CANDLE #2 (500 CFM)
C109	FLARE - PORTABLE CANDLE #3 (500 CFM)

I. RESTRICTIONS.

Emission Restriction(s).

 # 001 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Pursuant to the Best Available Control Technology provisions of 25 Pa. Code Section 127.12(a)(5) of Chapter 127 of the Rules and Regulations of the Department of Environmental Protection the following requirements are hereby established for open flare:

1. Open flares shall be limited to 500 dscfm each, at 50% methane (net heat input not to exceed 15 million Btu per hour, calculated on the higher heating value of the landfill gas).

2. The total landfill gas combusted in open flare(s) at a facility shall not exceed the greater of either 500 dscfm, at 50% methane (net heat input not to exceed 15 million Btu per hour, calculated on the higher heating value of the landfill gas) or 20% of the total landfill gas flow, at 50% methane.

3. The non-enclosed flares shall be designed in accordance with the requirements of 40 C.F.R. Section 60.18 (40 C.F.R. Section 60.762(b)(2)(iii)(A)).

4. The open flares shall be equipped with an automatic pilot ignition source.

5. The open flares shall be equipped with an automatic shut-off mechanism designed to immediately stop the flow of gases when a flame-out occurs.

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

III. MONITORING REQUIREMENTS.

 # 002 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The landfill owner or operator will monitor, on a daily basis, the flow rate, in dscfm, of the landfill gas to be combusted in the flares.

 # 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.766]

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Monitoring of operations.

Each owner or operator seeking to comply with § 60.762(b)(2)(iii) using a non-enclosed flare must install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

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

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

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

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15 minutes; and

(ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism 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.

IV. RECORDKEEPING REQUIREMENTS.

 # 004 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The landfill owner or operator will record, on a daily basis, the amount of landfill gas combusted in the flares.

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

VI. WORK PRACTICE REQUIREMENTS.

 # 005 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

1. The Department may approve the use of an open flares for flow rates higher than 500 dscfm, at 50% methane (net heat input can exceed 15 million Btu per hour, calculated on the higher heating value of the landfill gas), provided that the company provides a detailed technical and economic analysis of the use of an open flare versus an enclosed flare.

2. The open flare shall be operated with a flame present at all times.

3. Pursuent to the requirements of 40 C.F.R. Section 60.18, open flare shall be located in a manner to mitigate visual impacts by meeting any one of the following requirements:

a. Blocking the view of the flares with screening or plantings;
b. Erecting a berm or similar earthwork barrier (berm);
c. Locating the open flares behind an existing berm, or placing it in a hollow or other depression;
d. Placing the flare at least 500 feet from the nearest occupied private residence (a residence that is owned by the landfill or any entity affiliated with the landfill is not deemed a private residence); or
e. Installing a shroud that has been designed to minimize visible flames during normal operation.

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

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Group Name: 08

Group Description: Landfill Phase 3 (Gas Collection System)

Sources included in this group

ID	Name
106	LANDFILL PHASE 3 (GAS COLLECTION SYSTEM)
C103A	ENCLOSED FLARE 2 (6000 CFM)
C105A	ENCLOSED FLARE 3 (6000 CFM)
C110	FLARE - ENCLOSED (5000 CFM)
Z102	FUGITIVE LANDFILL EMISSIONS

I. RESTRICTIONS.

Emission Restriction(s).

 # 001 [25 Pa. Code §123.21]

General

No person may permit the emission into the outdoor atmosphere of sulfur oxides from a source in a manner that the concentration of the sulfur oxides, expressed as SO2, in the effluent gas exceeds 500 parts per million, by volume, dry basis.

 # 002 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The owner/operator shall forecast, on an annual basis, both the potential and actual VOC emissions for the following year. Actual VOC emission estimates shall include current and scheduled collection system configurations for the forecast year. If the forecast indicates that the existing and scheduled landfill gas collection and control system is not sufficient to maintain emissions of VOC from the phase 2 below the threshold of 50 tons per year, additional collection and/or control shall be installed within six months of the forecast to ensure that the VOC emissions do not exceed the 50 tons per year emission limit.

 # 003 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

No person may permit the emission into the outdoor atmosphere of particulate matter from this source at any time, in excess of 0.04 gr/dscf, pursuant to 25 Pa. Code § 123.13 (c)(1)(i).

 # 004 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

All performance tests shall be conducted in accordance with 40 CFR §60.764 and the Department's source testing procedures described in the latest Source Testing Manual reference in 25 Pa Code Section 139.4(5).

 # 005 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Pursuant to the Best Available control Technology provisions of 25 Pa. Code Section 127.12(a)(5) of Chapter 127 of the Rules and Regulations of the Department of Environmental Protection the following requirements are hereby established for flare.

(a) The flare shall be operated to either reduce the non-methane organic compound (NMOC) emissions by 98% by weight or reduce the outlet concentration to less than 20 parts per million by volume, dry basis, reported as hexane at 3% oxygen.
(b) The flare shall be operated at all times with no visible flame shooting from the flare.
(c) The flue gas temperature shall be continuously measured and recorded.
(d) The flare shall be designed to operate at a minimum operating temperature of 1500 degrees Fahrenheit at a residence time of at least 0.3 seconds.
(e) Prior to the performance test, the flare shall be continuously monitored and operated at a minimum temperature of 1500 degrees Fahrenheit. After completion of the initial performance test, the flare shall be continuously monitored and operated at the minimum flare temperature achieved during the performance test, in which compliance with paragraph (a) above, was demonstrated.
(f) The enclosed ground flare shall be equipped with a manual pilot ignition system, which uses an auxiliary fuel, e.g.,propane, natural gas. The pilot ignition system shall be designed and equipped to manually ignite the pilot after

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sensing that the engines are off line.
(g) The flare shall be operated with a flame present at all times. The flare shall be equipped with an automatic shut-off mechanism designed to immediately stop the flow of gases when a flame-out occurs. During re-start or start-up, there shall be sufficient flow of auxiliary fuel to the burners such that unburnt landfill gases are not emitted to the atmosphere.
(h) The flare shall be designed for and operated with no visible emissions except for periods not to exceed a total of 5-minutes during any two consecutive hours.

 # 006 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The landfill is subject to Subpart AAAA of the National Emission Standards of Hazardous Air Emissions and shall comply with all applicable requirements of this Subpart.

Throughput Restriction(s).

 # 007 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The average daily amount of municipal solid waste (MSW) disposal in the Phase II landfill site shall be not be more than 7,250 tons calculated on a standard quarter.

 # 008 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The average daily amount of municipal solid waste (MSW) disposal in the Phase II landfill site shall be not be more than 7,250 tons calculated on a standard quarter.

The maximum daily volume of municipal solid waste (MSW) disposal in the Phase II landfill site shall be not be more than 7,500 tons calculated on a standard quarter.

The annual amount of municipal solid waste (MSW) disposal in the Phase II landfill site shall be not be more than 2,262,000 tons.

Control Device Efficiency Restriction(s).

 # 009 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The active gas collection system may not have a collection efficiency of less than 75.00% for Volatile Organic Compounds.

II. TESTING REQUIREMENTS.

 # 010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.764]

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Test methods and procedures.

(a)

(1)NMOC Emission Rate. The landfill owner or operator must calculate the NMOC emission rate using either Equation 1 provided in paragraph (a)(1)(i) of this section or Equation 2 provided in paragraph (a)(1)(ii) of this section. Both Equation 1 and Equation 2 may be used if the actual year-to-year solid waste acceptance rate is known, as specified in paragraph (a)(1)(i) of this section, for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in paragraph (a)(1)(ii) of this section, for part of the life of the landfill. The values to be used in both Equation 1 and Equation 2 are 0.05 per year for k, 170 cubic meters per megagram for Lo, and 4,000 parts per million by volume as hexane for the CNMOC. For landfills located in geographical areas with a 30-year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorologic site, the k value to be used is 0.02 per year.

(i)

(A) Equation 1 must be used if the actual year-to-year solid waste acceptance rate is known.

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Refer to regulation 40 CFR Part 60, Subpart XXX, § 60.764 a(1)(i) for formula, to Eq. 1.

Where:

MNMOC = Total NMOC emission rate from the landfill, megagrams per year.

k = Methane generation rate constant, year-1.

Lo = Methane generation potential, cubic meters per megagram solid waste.

Mi = Mass of solid waste in the i th section, megagrams.

ti = Age of the i th section, years.

CNMOC = Concentration of NMOC, parts per million by volume as hexane.

3.6 × 10-9 = Conversion factor.

(B) The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for Mi if documentation of the nature and amount of such wastes is maintained.

(ii)

(A) Equation 2 must be used if the actual year-to-year solid waste acceptance rate is unknown.

Refer to regulation 40 CFR Part 60, Subpart XXX, § 60.764 a(1)(ii) for formula, Eq.2.

Where:

MNMOC = Mass emission rate of NMOC, megagrams per year.

Lo = Methane generation potential, cubic meters per megagram solid waste.

R = Average annual acceptance rate, megagrams per year.

k = Methane generation rate constant, year-1.

t = Age of landfill, years.

CNMOC = Concentration of NMOC, parts per million by volume as hexane.

c = Time since closure, years; for active landfill c = 0 and e-kc = 1.

3.6 × 10-9 = Conversion factor.

(B) The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value of R, if documentation of the nature and amount of such wastes is maintained.

(2)Tier 1. The owner or operator must compare the calculated NMOC mass emission rate to the standard of 34 megagrams per year.

(i) If the NMOC emission rate calculated in paragraph (a)(1) of this section is less than 34 megagrams per year, then the landfill owner or operator must submit an NMOC emission rate report according to § 60.767(b), and must recalculate the NMOC mass emission rate annually as required under § 60.762(b).

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(ii) If the calculated NMOC emission rate as calculated in paragraph (a)(1) of this section is equal to or greater than 34 megagrams per year, then the landfill owner must either:

(A) Submit a gas collection and control system design plan within 1 year as specified in § 60.767(c) and install and operate a gas collection and control system within 30 months according to § 60.762(b)(2)(ii) and (iii);

(B) Determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the Tier 2 procedures provided in paragraph (a)(3) of this section; or

(C) Determine a site-specific methane generation rate constant and recalculate the NMOC emission rate using the Tier 3 procedures provided in paragraph (a)(4) of this section.

(3)Tier 2. The landfill owner or operator must determine the site-specific NMOC concentration using the following sampling procedure. The landfill owner or operator must install at least two sample probes per hectare, evenly distributed over the landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The probes should be evenly distributed across the sample area. The sample probes should be located to avoid known areas of nondegradable solid waste. The owner or operator must collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25 or 25C of appendix A of this part. Taking composite samples from different probes into a single cylinder is allowed; however, equal sample volumes must be taken from each probe. For each composite, the sampling rate, collection times, beginning and ending cylinder vacuums, or alternative volume measurements must be recorded to verify that composite volumes are equal. Composite sample volumes should not be less than one liter unless evidence can be provided to substantiate the accuracy of smaller volumes. Terminate compositing before the cylinder approaches ambient pressure where measurement accuracy diminishes. If more than the required number of samples are taken, all samples must be used in the analysis. The landfill owner or operator must divide the NMOC concentration from Method 25 or 25C of appendix A of this part by six to convert from CNMOC as carbon to CNMOC as hexane. If the landfill has an active or passive gas removal system in place, Method 25 or 25C samples may be collected from these systems instead of surface probes provided the removal system can be shown to provide sampling as representative as the two sampling probe per hectare requirement. For active collection systems, samples may be collected from the common header pipe. The sample location on the common header pipe must be before any gas moving, condensate removal, or treatment system equipment. For active collection systems, a minimum of three samples must be collected from the header pipe.

(i) Within 60 days after the date of completing each performance test (as defined in § 60.8), the owner or operator must submit the results according to § 60.767(i)(1).

(ii) The landfill owner or operator must recalculate the NMOC mass emission rate using Equation 1 or Equation 2 provided in paragraph (a)(1)(i) or (a)(1)(ii) of this section and using the average site-specific NMOC concentration from the collected samples instead of the default value provided in paragraph (a)(1) of this section.

(iii) If the resulting NMOC mass emission rate is less than 34 megagrams per year, then the owner or operator must submit a periodic estimate of NMOC emissions in an NMOC emission rate report according to § 60.767(b)(1), and must recalculate the NMOC mass emission rate annually as required under § 60.762(b). The site-specific NMOC concentration must be retested every 5 years using the methods specified in this section.

(iv) If the NMOC mass emission rate as calculated using the Tier 2 site-specific NMOC concentration is equal to or greater than 34 megagrams per year, the landfill owner or operator must either:

(A) Submit a gas collection and control system design plan within 1 year as specified in § 60.767(c) and install and operate a gas collection and control system within 30 months according to § 60.762(b)(2)(ii) and (iii);

(B) Determine a site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the Tier 3 procedures specified in paragraph (a)(4) of this section; or

(C) Conduct a surface emission monitoring demonstration using the Tier 4 procedures specified in paragraph (a)(6) of this section.

(4)Tier 3. The site-specific methane generation rate constant must be determined using the procedures provided in

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Method 2E of appendix A of this part. The landfill owner or operator must estimate the NMOC mass emission rate using Equation 1 or Equation 2 in paragraph (a)(1)(i) or (ii) of this section and using a site-specific methane generation rate constant, and the site-specific NMOC concentration as determined in paragraph (a)(3) of this section instead of the default values provided in paragraph (a)(1) of this section. The landfill owner or operator must compare the resulting NMOC mass emission rate to the standard of 34 megagrams per year.

(i) If the NMOC mass emission rate as calculated using the Tier 2 site-specific NMOC concentration and Tier 3 site-specific methane generation rate is equal to or greater than 34 megagrams per year, the owner or operator must either:

(A) Submit a gas collection and control system design plan within 1 year as specified in § 60.767(c) and install and operate a gas collection and control system within 30 months according to § 60.762(b)(2)(ii) and (iii); or

(B) Conduct a surface emission monitoring demonstration using the Tier 4 procedures specified in paragraph (a)(6) of this section.

(ii) If the NMOC mass emission rate is less than 34 megagrams per year, then the owner or operator must recalculate the NMOC mass emission rate annually using Equation 1 or Equation 2 in paragraph (a)(1) of this section and using the site-specific Tier 2 NMOC concentration and Tier 3 methane generation rate constant and submit a periodic NMOC emission rate report as provided in § 60.767(b)(1). The calculation of the methane generation rate constant is performed only once, and the value obtained from this test must be used in all subsequent annual NMOC emission rate calculations.

(5)Other methods. The owner or operator may use other methods to determine the NMOC concentration or a site-specific methane generation rate constant as an alternative to the methods required in paragraphs (a)(3) and (4) of this section if the method has been approved by the Administrator.

(6)Tier 4. The landfill owner or operator must demonstrate that surface methane emissions are below 500 parts per million. Surface emission monitoring must be conducted on a quarterly basis using the following procedures. Tier 4 is allowed only if the landfill owner or operator can demonstrate that NMOC emissions are greater than or equal to 34 Mg/yr but less than 50 Mg/yr using Tier 1 or Tier 2. If both Tier 1 and Tier 2 indicate NMOC emissions are 50 Mg/yr or greater, then Tier 4 cannot be used. In addition, the landfill must meet the criteria in paragraph (a)(6)(viii) of this section.

(i) The owner or operator must measure surface concentrations of methane along the entire perimeter of the landfill and along a pattern that traverses the landfill at no more than 30-meter intervals using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in § 60.765(d).

(ii) The background concentration must be determined by moving the probe inlet upwind and downwind at least 30 meters from the waste mass boundary of the landfill.

(iii) Surface emission monitoring must be performed in accordance with section 8.3.1 of Method 21 of appendix A of this part, except that the probe inlet must be placed no more than 5 centimeters above the landfill surface; the constant measurement of distance above the surface should be based on a mechanical device such as with a wheel on a pole, except as described in paragraph (a)(6)(iii)(A) of this section.

(A) The owner or operator must use a wind barrier, similar to a funnel, when onsite average wind speed exceeds 4 miles per hour or 2 meters per second or gust exceeding 10 miles per hour. Average on-site wind speed must also be determined in an open area at 5-minute intervals using an on-site anemometer with a continuous recorder and data logger for the entire duration of the monitoring event. The wind barrier must surround the SEM monitor, and must be placed on the ground, to ensure wind turbulence is blocked. SEM cannot be conducted if average wind speed exceeds 25 miles per hour.

(B)Landfill surface areas where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover, and all cover penetrations must also be monitored using a device meeting the specifications provided in § 60.765(d).

(iv) Each owner or operator seeking to comply with the Tier 4 provisions in paragraph (a)(6) of this section must maintain records of surface emission monitoring as provided in § 60.768(g) and submit a Tier 4 surface emissions report as provided in § 60.767(c)(4)(iii).

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(v) If there is any measured concentration of methane of 500 parts per million or greater from the surface of the landfill, the owner or operator must submit a gas collection and control system design plan within 1 year of the first measured concentration of methane of 500 parts per million or greater from the surface of the landfill according to § 60.767(c) and install and operate a gas collection and control system according to § 60.762(b)(2)(ii) and (iii) within 30 months of the most recent NMOC emission rate report in which the NMOC emission rate equals or exceeds 34 megagrams per year based on Tier 2.

(vi) If after four consecutive quarterly monitoring periods at a landfill, other than a closed landfill, there is no measured concentration of methane of 500 parts per million or greater from the surface of the landfill, the owner or operator must continue quarterly surface emission monitoring using the methods specified in this section.

(vii) If after four consecutive quarterly monitoring periods at a closed landfill there is no measured concentration of methane of 500 parts per million or greater from the surface of the landfill, the owner or operator must conduct annual surface emission monitoring using the methods specified in this section.

(viii) If a landfill has installed and operates a collection and control system that is not required by this subpart, then the collection and control system must meet the following criteria:

(A) The gas collection and control system must have operated for 6,570 out of 8,760 hours preceding the Tier 4 surface emissions monitoring demonstration.

(B) During the Tier 4 surface emissions monitoring demonstration, the gas collection and control system must operate as it normally would to collect and control as much landfill gas as possible.

(b) After the installation and startup of a collection and control system in compliance with this subpart, the owner or operator must calculate the NMOC emission rate for purposes of determining when the system can be capped, removed or decommissioned as provided in § 60.762(b)(2)(v), using Equation 3:

Refer to regulation 40 CFR Part 60, Subpart XXX, § 60.764(b) for formula, Eq. 3.

Where:

MNMOC = Mass emission rate of NMOC, megagrams per year.

QLFG = Flow rate of landfill gas, cubic meters per minute.

CNMOC = NMOC concentration, parts per million by volume as hexane.

(1) The flow rate of landfill gas, QLFG, 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 Method 2E of appendix A of this part.

(2) The average NMOC concentration, CNMOC, 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 Method 25 or Method 25C. The sample location on the common header pipe must be before any condensate removal or other gas refining units. The landfill owner or operator must divide the NMOC concentration from Method 25 or Method 25C of appendix A of this part by six to convert from CNMOC as carbon to CNMOC as hexane.

(3) The owner or operator may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Administrator.

(i) Within 60 days after the date of completing each performance test (as defined in § 60.8), the owner or operator must submit the results of the performance test, including any associated fuel analyses, according to § 60.767(i)(1).

(ii) [Reserved]

(c) When calculating emissions for Prevention of Significant Deterioration purposes, the owner or operator of each MSW

SECTION E. Source Group Plan Approval Restrictions.

landfill subject to the provisions of this subpart must estimate the NMOC emission rate for comparison to the Prevention of Significant Deterioration major source and significance levels in §§ 51.166 or 52.21 of this chapter using Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources (AP-42) or other approved measurement procedures.

(d) For the performance test required in § 60.762(b)(2)(iii)(B), Method 25 or 25C (Method 25C may be used at the inlet only) of appendix A of this part 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 Administrator as provided by § 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 landowner or operator 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:

Refer to regulation 40 CFR Part 60, Subpart XXX, § 60.764(d) for formula, Eq.4.

Where:

NMOCin = Mass of NMOC entering control device.

NMOCout = Mass of NMOC exiting control device.

(e) For the performance test required in § 60.762(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in § 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 § 60.18(f)(4).

(1) Within 60 days after the date of completing each performance test (as defined in § 60.8), the owner or operator must submit the results of the performance tests, including any associated fuel analyses, required by § 60.764(b) or (d) according to § 60.767(i)(1).

(2) [Reserved]

III. MONITORING REQUIREMENTS.

 # 011 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The permittee shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment when operating the enclosed flares.

(a) A temperature monitoring device equipped with a continuous recorder and having an accuracy of (+/-) 1 percent of the temperature being measured expressed in degrees Celsius or degrees Fahrenheit (+/-) 0.5°C or (+/-) 0.9°F, whichever is greater.

(b) A gas flow rate measuring device that provides a measurement of gas flow to or bypass of the control device. The permittee shall operate, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes.

 # 012 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The permittee shall comply with monitoring requirements in 40 CFR §60.766 which apply to the gas collection systems installed and operated at this facility.

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 # 013 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The owner/operator shall comply with monitoring requirements as specified in 40 CFR §60.765 for the installed gas collection system.

 # 014 [25 Pa. Code §127.511]

Monitoring and related recordkeeping and reporting requirements.

(a) The permittee shall routinely conduct inspections of the gas extraction and collection system associated with the solid waste disposal area to ensure that no leaks of landfill gas are occurring from the system.

(b) Any such leaks shall be immediately repaired.

 # 015 [25 Pa. Code §127.511]

Monitoring and related recordkeeping and reporting requirements.

The permittee shall, on a daily basis, determine the total amount of landfill gas generated by the landfill and the total amount of landfill gas combusted by the cogeneration plant and/or flares. The total volume of landfill gas generated shall be determined using the EPA Landfill Gas Emissions Model (2.0 or latest version) by inputting actual waste landfilling rates and actual landfill gas (NMOC) concentrations.

 # 016 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.766]

Subpart XXX - Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014

Monitoring of operations.

Except as provided in § 60.767(c)(2):

(a) Each owner or operator seeking to comply with § 60.762(b)(2)(ii)(C) for an active gas collection system must install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and:

(1) Measure the gauge pressure in the gas collection header on a monthly basis as provided in § 60.765(a)(3); and

(2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as follows:

(i) The nitrogen level must be determined using Method 3C, unless an alternative test method is established as allowed by § 60.767(c)(2).

(ii) Unless an alternative test method is established as allowed by § 60.767(c)(2), the oxygen level must be determined by an oxygen meter using Method 3A, 3C, or ASTM D6522-11 (incorporated by reference, see § 60.17). Determine the oxygen level by an oxygen meter using Method 3A, 3C, 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.

(iii) 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 Method 3A or ASTM D6522-11 (incorporated by reference, see § 60.17).

SECTION E. Source Group Plan Approval Restrictions.

(3) Monitor temperature of the landfill gas on a monthly basis as provided in § 60.765(a)(5). The temperature measuring device must be calibrated annually using the procedure in 40 CFR part 60, appendix A-1, Method 2, Section 10.3.

(b) Each owner or operator seeking to comply with § 60.762(b)(2)(iii) using an enclosed combustor must calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment:

(1) A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 degrees Celsius, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity equal to or greater than 44 megawatts.

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

(i) 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

(ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism 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) Each owner or operator seeking to comply with § 60.762(b)(2)(iii) using a non-enclosed flare must install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

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

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

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

(ii) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism 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.

(d) Each owner or operator seeking to demonstrate compliance with § 60.762(b)(2)(iii) using a device other than a non-enclosed flare or an enclosed combustor or a treatment system must provide information satisfactory to the Administrator as provided in § 60.767(c)(2) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator must review the information and either approve it, or request that additional information be submitted. The Administrator may specify additional appropriate monitoring procedures.

(e) Each owner or operator seeking to install a collection system that does not meet the specifications in § 60.769 or seeking to monitor alternative parameters to those required by §§ 60.763 through 60.766 must provide information satisfactory to the Administrator as provided in § 60.767(c)(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 Administrator may specify additional appropriate monitoring procedures.

(f) Each owner or operator seeking to demonstrate compliance with the 500 parts per million surface methane operational standard in § 60.763(d) must monitor surface concentrations of methane according to the procedures in § 60.765(c) and the instrument specifications in § 60.765(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

(g) Each owner or operator seeking to demonstrate compliance with § 60.762(b)(2)(iii) using a landfill gas treatment

SECTION E. Source Group Plan Approval Restrictions.

system must maintain and operate all monitoring systems associated with the treatment system in accordance with the site-specific treatment system monitoring plan required in § 60.768(b)(5)(ii) and must calibrate, maintain, and operate according to the manufacturer's specifications a device that records flow to the treatment system and bypass of the treatment system (if applicable). The owner or operator must:

(1) Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the treatment system 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.

(h) The monitoring requirements of paragraphs (b), (c) (d) and (g) of this section 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.

IV. RECORDKEEPING REQUIREMENTS.

 # 017 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The operating temperature of the combustion system shall be continuously measured and recorded. The temperature shall be monitored and maintained at the minimum temperature achieved during the performance test in which compliance with the DRE requirement was demonstrated. The average combustion temperature shall be measured at least every 15 minutes and average over the same time period of the performance test.

 # 018 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Temperatures shall be recorded whenever the flare is in operation. The recording charts shall be made available to the Department personnel upon request. These records shall be maintained for a period of time not less than five (5) years.

 # 019 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The owner/operator shall comply with recordkeeping requirements as specified in 40 CFR §60.768.

 # 020 [25 Pa. Code §127.511]

Monitoring and related recordkeeping and reporting requirements.

The permittee shall maintain records sufficient to demonstrate that the collection/capture efficiency of the landfill gas collection system is at least 75%.

 # 021 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.768]

Subpart XXX - Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014

Recordkeeping requirements.

(a) Except as provided in § 60.767(c)(2), each owner or operator of an MSW landfill subject to the provisions of § 60.762(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 that triggered § 60.762(b), 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 § 60.767(c)(2), each owner or operator of a controlled landfill must keep up-to-date, readily accessible records for the life of the control system equipment of the data listed in paragraphs (b)(1) through (5) of this section 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.

SECTION E. Source Group Plan Approval Restrictions.

(1) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 60.762(b)(2)(ii):

(i) The maximum expected gas generation flow rate as calculated in § 60.765(a)(1). The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Administrator.

(ii) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in § 60.769(a)(1).

(2) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 60.762(b)(2)(iii) through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity equal to or greater than 44 megawatts:

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

(ii) The percent reduction of NMOC determined as specified in § 60.762(b)(2)(iii)(B) achieved by the control device.

(3) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 60.762(b)(2)(iii)(B)(1) through use of a boiler or process heater of any size: A description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing.

(4) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 60.762(b)(2)(iii)(A) through use of a non-enclosed flare, the flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in § 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.

(5) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 60.762(b)(2)(iii) through use of a landfill gas treatment system:

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

(ii)Site-specific treatment monitoring plan, to include:

(A) 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.

(B) 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.

(C) Documentation of the monitoring methods and ranges, along with justification for their use.

(D) Identify who is responsible (by job title) for data collection.

(E) Processes and methods used to collect the necessary data.

(F) Description of the procedures and methods that are used for quality assurance, maintenance, and repair of all continuous monitoring systems.

(c) Except as provided in § 60.767(c)(2), each owner or operator of a controlled landfill subject to the provisions of this subpart must keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in § 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.

SECTION E. Source Group Plan Approval Restrictions.

(1) The following constitute exceedances that must be recorded and reported under § 60.767(g):

(i) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal units per hour) or greater, 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 § 60.762(b)(2)(iii) was determined.

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

(2) Each owner or operator subject to the provisions of this subpart must keep up-to-date, readily accessible continuous records of the indication of flow to the control system 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 § 60.766.

(3) Each owner or operator subject to the provisions of this subpart who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with § 60.762(b)(2)(iii) must keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other state, local, tribal, or federal regulatory requirements.)

(4) Each owner or operator seeking to comply with the provisions of this subpart 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 § 60.766(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

(5) Each owner or operator of a landfill seeking to comply with § 60.762(b)(2) using an active collection system designed in accordance with § 60.762(b)(2)(ii) must keep records of periods when the collection system or control device is not operating.

(d) Except as provided in § 60.767(c)(2), each owner or operator subject to the provisions of this subpart must keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

(1) Each owner or operator subject to the provisions of this subpart must keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under § 60.765(b).

(2) Each owner or operator subject to the provisions of this subpart must 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 § 60.769(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in § 60.769(a)(3)(ii).

(e) Except as provided in § 60.767(c)(2), each owner or operator subject to the provisions of this subpart must keep for at least 5 years up-to-date, readily accessible records of the following:

(1) All collection and control system exceedances of the operational standards in § 60.763, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

(2) Each owner or operator subject to the provisions of this subpart must also keep records of 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.

(3) For any root cause analysis for which corrective actions are required in § 60.765(a)(3)(i) or (a)(5)(i), 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 § 60.765(a)(3)(ii) or (a)(5)(ii), 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.

SECTION E. Source Group Plan Approval Restrictions.

(5) For any root cause analysis for which corrective actions are required in § 60.765(a)(3)(iii) or (a)(5)(iii), 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 regulatory agency.

(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 megagrams or 2.5 million cubic meters, 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)Landfill owners or operators seeking to demonstrate that site-specific surface methane emissions are below 500 parts per million by conducting surface emission monitoring under the Tier 4 procedures specified in § 60.764(a)(6) must keep for at least 5 years up-to-date, readily accessible records of all surface emissions monitoring and information related to monitoring instrument calibrations conducted according to sections 8 and 10 of Method 21 of appendix A of this part, including all of the following items:

(1) Calibration records:

(i) Date of calibration and initials of operator performing the calibration.

(ii) Calibration gas cylinder identification, certification date, and certified concentration.

(iii) Instrument scale(s) used.

(iv) A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value.

(v) If an owner or operator makes their own calibration gas, a description of the procedure used.

(2) Digital photographs of the instrument setup, including the wind barrier. The photographs must be time and date-stamped and taken at the first sampling location prior to sampling and at the last sampling location after sampling at the end of each sampling day, for the duration of the Tier 4 monitoring demonstration.

(3) Timestamp of each surface scan reading:

(i) Timestamp should be detailed to the nearest second, based on when the sample collection begins.

(ii) A log for the length of time each sample was taken using a stopwatch (e.g., the time the probe was held over the area).

(4) Location of each surface scan reading. The owner or operator must determine the coordinates using an instrument with an accuracy of at least 4 meters. Coordinates must be in decimal degrees with at least five decimal places.

(5) Monitored methane concentration (parts per million) of each reading.

(6) Background methane concentration (parts per million) after each instrument calibration test.

(7) Adjusted methane concentration using most recent calibration (parts per million).

(8) For readings taken at each surface penetration, the unique identification location label matching the label specified in paragraph (d) of this section.

(9) Records of the operating hours of the gas collection system for each destruction device.

(h) Except as provided in § 60.767(c)(2), each owner or operator subject to the provisions of this subpart must keep for at

SECTION E. Source Group Plan Approval Restrictions.

least 5 years up-to-date, readily accessible records of all collection and control system monitoring data for parameters measured in § 60.766(a)(1), (2), and (3).

(i) Any records required to be maintained by this subpart that are submitted electronically via the EPA's CDX may be maintained in electronic format.

(j) For each owner or operator reporting leachate or other liquids addition under § 60.767(k), keep records of any engineering calculations or company records used to estimate the quantities of leachate or liquids added, the surface areas for which the leachate or liquids were applied, and the estimates of annual waste acceptance or total waste in place in the areas where leachate or liquids were applied.

 # 022 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1980]

Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills

What records and reports must I keep and submit?

(a) The permitee shall maintain at the affected source a current startup, shutdown, and malfunction plan and must make the plan available upon request for inspection and copying by the EPA. In addition, if the startup, shutdown, and malfunction plan is subsequently revised pursuant to paragraph (b) or 40 C.F.R. Sec. 63.6(e)(3)(viii), the permitee must maintain at the affected source each previous (i.e., superseded) version of the startup, shutdown, and malfunction plan, and must make each such previous version available for inspection and copying by the EPA or the Department for a period of 5 years after revision of the plan. If at any time after adoption of a startup, shutdown, and malfunction plan the affected source ceases operation or is otherwise no longer subject to the provisions of this part, the permittee must retain a copy of the most recent plan for 5 years from the date the source ceases operation or is no longer subject to this part and must make the plan available upon request for inspection and copying by the EPA and the Department. The EPA or the Department may at any time request in writing that the owner or operator submit a copy of any startup, shutdown, and malfunction plan (or a portion thereof) which is maintained at the affected source or in the possession of the permitee. Upon receipt of such a request, the permittee must promptly submit a copy of the requested plan (or a portion thereof) to the EPA or the Department.

(b) The owner or operator may periodically revise the startup, shutdown, and malfunction plan for the affected source as necessary to satisfy the requirements of this part or to reflect changes in equipment or procedures at the affected source. Unless the permitting authority provides otherwise, the owner or operator may make such revisions to the startup, shutdown, and malfunction plan without prior approval by the EPA or the Department. However, each such revision to a startup, shutdown, and malfunction plan must be reported in the semiannual report. If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the permittee developed the plan, the permittee must revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the permittee makes any revision to the startup, shutdown, and malfunction plan which alters
the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under this part, the revised plan shall not take effect until after the owner or operator has provided a written notice describing the revision to the EPA and the Department.

 # 023 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1980]

Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills

What records and reports must I keep and submit?

Startup, shutdown, and malfunction plan.

When actions taken by the permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the permittee must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a ``checklist,'' or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for that event. In addition, the permittee must keep records of these events as specified in 40 C.F.R. Sec. 63.10(b), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. Furthermore, the permitee shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more

SECTION E. Source Group Plan Approval Restrictions.

frequent) startup, shutdown, and malfunction report required.

V. REPORTING REQUIREMENTS.

 # 024 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

1. On a quarterly basis, the owner/operator shall report the following for the preceding 3-month period:

a. Average collected landfill gas flow rate in cfm by month and calculated collection efficiency for each quarter;

b. Average quality of collected landfill gas by month including percent methane, percent carbon dioxide, percent oxygen and percent balance gas;

c. Predicted average landfill gas generation rate for the current year as calculated by the latest run of a landfill gas prediction model;

d. Data from quarterly surface emission monitoring in a summary spreadsheet.

 # 025 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The permittee shall comply with applicable reporting requirements specified in 40 CFR §60.767 (relating to reporting requirements). At a minimum, the permittee shall submit the following reports to the Department:

(a) A Closure Report which meets the requirements of 40 CFR §60.767(e) shall be submitted to the Department within 30 days prior to the cessation of operation of a gas collection system.

(b) The Initial Performance Test Report required under 40 CFR §60.8 and 60.767(g) shall be submitted by the permittee to the Department within 180 days after installation and startup of the gas collection system.

(c) The Annual Compliance Report required under 40 CFR §60.767(f) and (g) shall be submitted to the Department within 180 days after installation and startup of the gas collection system and shall include the Initial Performance Test Report required under 40 CFR §60.8.

(d) The Closure Report which meets the requirements of 40 CFR §60.767(d) shall be submitted to the Department within 30 days of the cessation of waste acceptance if the landfill is preparing to permanent closure in accordance with criteria specified in 40 CFR §258.60.

(e) This landfill is subject to Subpart XXX of the Standards of Performance for New Stationary Sources and shall comply with all applicable requirements of this Subpart. 40 CFR §60.4 requires submission of copies of all requests, reports, applications, submittals, and other communications to both EPA and the Department. The EPA copies shall be forwarded to:

Director
Associate Director, Office of Air Enforcement and Compliance Assistance
1650 Arch Street
Philadelphia, PA 19103

(f) An application, form, report or compliance certification submitted to the Department under this permit contain certification by a responsible official as to truth, accuracy, and completeness as required under 25 Pa. Code 127.402(d).

(g) The certification by a responsible official of the facility shall state that based on information and belief formed after reasonable inquiry, the statements and information in the documents are true, and complete.

(h) The permittee shall comply with applicable recordkeeping requirements specified in 40 CFR §60.768 (relating to recordkeeping requirements). The records shall be kept for at least 5 years and shall include up-to-date, readily accessible, onsite records of the maximum design capacity, the current amount of solid waste in-place, and the year-by-year

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acceptance rate. Offsite records may be maintained by the permittee if they are retrievable within 4 hours.

 # 026 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The landfill gas collection and control system will:

(a) Be designed to handle, over the intended use period of the gas control or treatment system equipment, the maximum expected gas flow rate from the entire landfill area that warrants control;

(b) Collect gas at a sufficient extraction rate (a rate sufficient to maintain a negative pressure at all well heads in the collection system without causing air infiltration, including any well heads connected to the system as a result of expansion or excess surface emissions, for the life of the blower); and,

(c) Be designed to minimize off-site migration of subsurface gas.

 # 027 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The landfill is subject to Subpart XXX of the Standards of Performance for New Stationary Sources and shall comply with all applicable requirements of this Subpart. 40 CFR §60.4 requires submission of copies of all requests, reports, applications, submittals, and other communications to both EPA and the Department. The EPA copies shall be forwarded to:

EPA Region III
Associate Director, Office of Air Enforcement and Compliance Assistance
1650 Arch Street
Philadelphia, PA 19103

 # 028 [25 Pa. Code §127.511]

Monitoring and related recordkeeping and reporting requirements.

The permittee shall, on a quarterly basis, submit a report demonstrating that the collection/capture efficiency of the landfill gas collection system was in compliance during the preceding three (3) months. This report shall be submitted to the Department within thirty (30) days of the close of the quarter.

 # 029 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.767]

Subpart XXX - Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014

Reporting requirements.

(a)Design capacity report. Each owner or operator subject to the requirements of this subpart must submit an initial design capacity report to the Administrator.

(1)Submission. The initial design capacity report fulfills the requirements of the notification of the date construction is commenced as required by § 60.7(a)(1) and must be submitted no later than:

(i) November 28, 2016, for landfills that commenced construction, modification, or reconstruction after July 17, 2014 but before August 29, 2016; or

(ii) Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction after August 29, 2016.

(2)Initial design capacity report. The initial design capacity report must contain the following information:

(i) A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the permit issued by the state, local, or tribal agency responsible for regulating the landfill.

(ii) The maximum design capacity of the landfill. Where the maximum design capacity is specified in the permit issued by the state, local, or tribal agency responsible for regulating the landfill, a copy of the permit specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity must be calculated using good engineering practices. The calculations must be

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provided, along with the relevant parameters as part of the report. The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. If the owner or operator chooses to convert the design capacity from volume to mass or from mass to volume to demonstrate its design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, the calculation must include a site-specific density, which must be recalculated annually. Any density conversions must be documented and submitted with the design capacity report. The state, tribal, local agency or Administrator may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill.

(3)Amended design capacity report. An amended design capacity report must be submitted to the Administrator providing notification of an increase in the design capacity of the landfill, within 90 days of an increase in the maximum design capacity of the landfill to meet or exceed 2.5 million megagrams and 2.5 million cubic meters. This increase in design capacity may result from an increase in the permitted volume of the landfill or an increase in the density as documented in the annual recalculation required in § 60.768(f).

(b)NMOC emission rate report. Each owner or operator subject to the requirements of this subpart must submit an NMOC emission rate report following the procedure specified in paragraph (i)(2) of this section to the Administrator initially and annually thereafter, except as provided for in paragraph (b)(1)(ii) of this section. The Administrator may request such additional information as may be necessary to verify the reported NMOC emission rate.

(1) The NMOC emission rate report must contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in § 60.764(a) or (b), as applicable.

(i) The initial NMOC emission rate report may be combined with the initial design capacity report required in paragraph (a) of this section and must be submitted no later than indicated in paragraphs (b)(1)(i)(A) and (B) of this section. Subsequent NMOC emission rate reports must be submitted annually thereafter, except as provided for in paragraph (b)(1)(ii) of this section.

(A) November 28, 2016, for landfills that commenced construction, modification, or reconstruction after July 17, 2014, but before August 29, 2016, or

(B) Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction after August 29, 2016.

(ii) If the estimated NMOC emission rate as reported in the annual report to the Administrator is less than 34 megagrams per year in each of the next 5 consecutive years, the owner or operator may elect to submit, following the procedure specified in paragraph (i)(2) of this section, an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate must include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based must be provided to the Administrator. This estimate must be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate must be submitted to the Administrator. The revised estimate must cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

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

(3) Each owner or operator subject to the requirements of this subpart is exempted from the requirements to submit an NMOC emission rate report, after installing a collection and control system that complies with § 60.762(b)(2), during such time as the collection and control system is in operation and in compliance with §§ 60.763 and 60.765.

(c)Collection and control system design plan. Each owner or operator subject to the provisions of § 60.762(b)(2) must submit a collection and control system design plan to the Administrator for approval according to the schedule in paragraph (c)(4) of this section. The collection and control system design plan must be prepared and approved by a professional engineer and must meet the following requirements:

(1) The collection and control system as described in the design plan must meet the design requirements in § 60.762(b)(2).

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(2) The collection and control system design plan must include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of §§ 60.763 through 60.768 proposed by the owner or operator.

(3) The collection and control system design plan must either conform with specifications for active collection systems in § 60.769 or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to § 60.769.

(4) Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters must submit a collection and control system design plan to the Administrator for approval within 1 year of the first NMOC emission rate report in which the NMOC emission rate equals or exceeds 34 megagrams per year, except as follows:

(i) If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in § 60.764(a)(3) and the resulting rate is less than 34 megagrams per year, annual periodic reporting must be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 34 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, must be submitted, following the procedures in paragraph (i)(2) of this section, within 180 days of the first calculated exceedance of 34 megagrams per year.

(ii) If the owner or operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant k, as provided in Tier 3 in § 60.764(a)(4), and the resulting NMOC emission rate is less than 34 Mg/yr, annual periodic reporting must be resumed. The resulting site-specific methane generation rate constant k must be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of § 60.764(a)(4) and the resulting site-specific methane generation rate constant k must be submitted, following the procedure specified in paragraph (i)(2) of this section, to the Administrator within 1 year of the first calculated emission rate equaling or exceeding 34 megagrams per year.

(iii) If the owner or operator elects to demonstrate that site-specific surface methane emissions are below 500 parts per million methane, based on the provisions of § 60.764(a)(6), then the owner or operator must submit annually a Tier 4 surface emissions report as specified in this paragraph following the procedure specified in paragraph (i)(2) of this section until a surface emissions readings of 500 parts per million methane or greater is found. If the Tier 4 surface emissions report shows no surface emissions readings of 500 parts per million methane or greater for four consecutive quarters at a closed landfill, then the landfill owner or operator may reduce Tier 4 monitoring from a quarterly to an annual frequency. The Administrator may request such additional information as may be necessary to verify the reported instantaneous surface emission readings. The Tier 4 surface emissions report must clearly identify the location, date and time (to nearest second), average wind speeds including wind gusts, and reading (in parts per million) of any value 500 parts per million methane or greater, other than non-repeatable, momentary readings. For location, you must determine the latitude and longitude coordinates using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places. The Tier 4 surface emission report must also include the results of the most recent Tier 1 and Tier 2 results in order to verify that the landfill does not exceed 50 Mg/yr of NMOC.

(A) The initial Tier 4 surface emissions report must be submitted annually, starting within 30 days of completing the fourth quarter of Tier 4 surface emissions monitoring that demonstrates that site-specific surface methane emissions are below 500 parts per million methane, and following the procedure specified in paragraph (i)(2) of this section.

(B) The Tier 4 surface emissions report must be submitted within 1 year of the first measured surface exceedance of 500 parts per million methane, following the procedure specified in paragraph (i)(2) of this section.

(5) The landfill owner or operator must notify the Administrator that the design plan is completed and submit a copy of the plan's signature page. The Administrator has 90 days to decide whether the design plan should be submitted for review. If the Administrator chooses to review the plan, the approval process continues as described in paragraph (c)(6) of this section. However, if the Administrator indicates that submission is not required or does not respond within 90 days, the landfill owner or operator can continue to implement the plan with the recognition that the owner or operator is proceeding at their own risk. In the event that the design plan is required to be modified to obtain approval, the owner or operator must take any steps necessary to conform any prior actions to the approved design plan and any failure to do so could result in an enforcement action.

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(6) Upon receipt of an initial or revised design plan, the Administrator must review the information submitted under paragraphs (c)(1) through (3) of this section and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems. If the Administrator does not approve or disapprove the design plan, or does not request that additional information be submitted within 90 days of receipt, then the owner or operator may continue with implementation of the design plan, recognizing they would be proceeding at their own risk.

(7) If the owner or operator chooses to demonstrate compliance with the emission control requirements of this subpart using a treatment system as defined in this subpart, then the owner or operator must prepare a site-specific treatment system monitoring plan as specified in § 60.768(b)(5).

(d)Revised design plan. The owner or operator who has already been required to submit a design plan under paragraph (c) of this section must submit a revised design plan to the Administrator for approval as follows:

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

(2) Prior to installing or expanding the gas collection system in a way that is not consistent with the design plan that was submitted to the Administrator according to paragraph (c) of this section.

(e)Closure report. Each owner or operator of a controlled landfill must submit a closure report to the Administrator within 30 days of waste acceptance cessation. The Administrator may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the Administrator, no additional wastes may be placed into the landfill without filing a notification of modification as described under § 60.7(a)(4).

(f)Equipment removal report. Each owner or operator of a controlled landfill must submit an equipment removal report to the Administrator 30 days prior to removal or cessation of operation of the control equipment.

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

(i) A copy of the closure report submitted in accordance with paragraph (e) of this section;

(ii) 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

(iii) 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.

(2) The Administrator may request such additional information as may be necessary to verify that all of the conditions for removal in § 60.762(b)(2)(v) have been met.

(g)Annual report. The owner or operator of a landfill seeking to comply with § 60.762(b)(2) using an active collection system designed in accordance with § 60.762(b)(2)(ii) must submit to the Administrator, following the procedure specified in paragraph (i)(2) of this section, annual reports of the recorded information in paragraphs (g)(1) through (7) of this section. The initial annual report must be submitted within 180 days of installation and startup of the collection and control system, and must include the initial performance test report required under § 60.8, as applicable, unless the report of the results of the performance test has been submitted to the EPA via the EPA's CDX. In the initial annual 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. For enclosed combustion devices

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and flares, reportable exceedances are defined under § 60.768(c).

(1) Value and length of time for exceedance of applicable parameters monitored under § 60.766(a), (b), (c), (d), and (g).

(2) 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 § 60.766.

(3) 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.

(4) All periods when the collection system was not operating.

(5) The location of each exceedance of the 500 parts per million methane concentration as provided in § 60.763(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 using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.

(6) The date of installation and the location of each well or collection system expansion added pursuant to § 60.765(a)(3), (a)(5), (b), and (c)(4).

(7) For any corrective action analysis for which corrective actions are required in § 60.765(a)(3) or (5) 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 reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(h)Initial performance test report. Each owner or operator seeking to comply with § 60.762(b)(2)(iii) must include the following information with the initial performance test report required under § 60.8:

(1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;

(2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;

(3) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;

(4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area; and

(5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and

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

(i)Electronic reporting. The owner or operator must submit reports electronically according to paragraphs (i)(1) and (2) of this section.

(1) Within 60 days after the date of completing each performance test (as defined in § 60.8), the owner or operator must submit the results of each performance test according to the following procedures:

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (https://www3.epa.gov/ttn/chief/ert/ert_info.html) at the time of the test, you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/). Performance test data must be submitted in a file

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format generated through the use of the EPA's ERT or an alternative file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site, once the XML schema is available. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file 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 Web site, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed 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 ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in § 60.4.

(2) Each owner or operator required to submit reports following the procedure specified in this paragraph must submit reports to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) The owner or operator must use the appropriate electronic report in CEDRI for this subpart 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). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the owner or operator must submit the report to the Administrator at the appropriate address listed in § 60.4. Once the form has been available in CEDRI for 90 calendar 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.

(j)Corrective action and the corresponding timeline. The owner or operator must submit according to paragraphs (j)(1) and (j)(2) of this section.

(1) For corrective action that is required according to § 60.765(a)(3)(iii) or (a)(5)(iii) 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 Administrator as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature monitoring value of 55 degrees Celsius (131 degrees Fahrenheit). The Administrator must approve the plan for corrective action and the corresponding timeline.

(2) For corrective action that is required according to § 60.765(a)(3)(iii) or (a)(5)(iii) and is not completed within 60 days after the initial exceedance, you must submit a notification to the Administrator as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature exceedance.

(k)Liquids addition. The owner or operator of an affected landfill with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters that has employed leachate recirculation or added liquids based on a Research, Development, and Demonstration permit (issued through Resource Conservation and Recovery Act, subtitle D, part 258) within the last 10 years must submit to the Administrator, annually, following the procedure specified in paragraph (i)(2) of this section, the following information:

(1) Volume of leachate recirculated (gallons per year) and the reported basis of those estimates (records or engineering estimates).

(2) Total volume of all other liquids added (gallons per year) and the reported basis of those estimates (records or engineering estimates).

(3) Surface area (acres) over which the leachate is recirculated (or otherwise applied).

(4) Surface area (acres) over which any other liquids are applied.

(5) The total waste disposed (megagrams) in the areas with recirculated leachate and/or added liquids based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates.

(6) The annual waste acceptance rates (megagrams per year) in the areas with recirculated leachate and/or added liquids, based on on-site records to the extent data are available, or engineering estimates.

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(7) The initial report must contain items in paragraph (k)(1) through (6) of this section per year for the initial annual reporting period as well as for each of the previous 10 years, to the extent historical data are available in on-site records, and the report must be submitted no later than:

(i) September 27, 2017, for landfills that commenced construction, modification, or reconstruction after July 17, 2014 but before August 29, 2016 containing data for the first 12 months after August 29, 2016; or

(ii) Thirteen (13) months after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction after August 29, 2016 containing data for the first 12 months after August 29, 2016.

(8) Subsequent annual reports must contain items in paragraph (k)(1) through (6) of this section for the 365-day period following the 365-day period included in the previous annual report, and the report must be submitted no later than 365 days after the date the previous report was submitted.

(9)Landfills may cease annual reporting of items in paragraphs (k)(1) through (7) of this section once they have submitted the closure report in paragraph (e) of this section.

(l)Tier 4 notification.

(1) The owner or operator of an affected landfill with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters must provide a notification of the date(s) upon which it intends to demonstrate site-specific surface methane emissions are below 500 parts per million methane, based on the Tier 4 provisions of § 60.764(a)(6). The landfill must also include a description of the wind barrier to be used during the SEM in the notification. Notification must be postmarked not less than 30 days prior to such date.

(2) If there is a delay to the scheduled Tier 4 SEM date due to weather conditions, including not meeting the wind requirements in § 60.764(a)(6)(iii)(A), the owner or operator of a landfill shall notify the Administrator by email or telephone no later than 48 hours before any delay or cancellation in the original test date, and arrange an updated date with the Administrator by mutual agreement.

 # 030 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1980]

Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills

What records and reports must I keep and submit?

The permittee shall submit the reports semi-annually and the report shall:

(a) Include a statement that indicates actions taken during startup, shutdown or malfunction are consistent with the procedures specified in the Startup, Shutdown and Malfunction Plan. Actions taken to minimize emissions during such startups, shutdowns, and malfunctions shall be summarized and may be done in checklist format. If actions are the same for each event, only one checklist is required.

(b) identify any instance where any action taken by permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the affected source's startup, shutdown, and malfunction plan, but the source does not exceed any applicable emission limitation in the relevant emission standard, or any revisions to the startup, shutdown, malfunction plan.

(b) include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded.

(c) consist of a letter, containing the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period.

 # 031 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1980]

Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills

What records and reports must I keep and submit?

If an action taken by the permittee during a startup, shutdown, or malfunction (including an action taken to correct a

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malfunction is not consistent with the procedures specified in the affected source's startup, shutdown, malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then the permittee must record the actions taken for that event and must report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event (unless the permittee makes alternative reporting arrangements, in advance, with the EPA).

VI. WORK PRACTICE REQUIREMENTS.

 # 032 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

1. Open storage (ponding or open top tanks) of leachate and/or condensate shall not be permitted.

2. Uncontrolled stripping of VOC from the leachate and/or condensate shall not be permitted.

 # 033 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The owner/operator shall measure the landfill gas collected by the collection system in order to compare with the landfill gas generation predicated by the latest landfill model & for calculating the collection efficiency quarterly.

 # 034 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The owner/operator shall forecast, on an annual basis, the landfill gas generation and collection for the following year. If the forecast indicates that the existing flare (s) is not sufficient to incinerate the collected gases, additional approved flare(s) shall be installed and operated within six months of the forecast to ensure that the 100 % of the collected gases are incinerated and/or destructed by other methods approved by the Department.

 # 035 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Within 30 minutes of start up of the combustion system, the combustion systems must achieve combustion temperature of at least a minimum temperature achieved during the performance test in which compliance with the DRE requirement was demonstrated.

 # 036 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The active collection systems must meet the following:

(a) Demonstrate that the siting of active collection wells, horizontal collectors, surface collectors, or other extraction devices is of sufficient density throughout all gas producing areas.

(b) Devices located within the interior and along the perimeter must be certified by a professional engineer to achieve uniform control of surface gas emissions.

(c) Design plans must address the following issues: Depth(s) of refuse; Refuse gas generation rates and flow characteristic; 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; Topographical map of the surface area and proposed surface monitoring route.

(d) Collection system siting should be of sufficient density to address landfill gas migration issues and augmentation of the system through the use of active or passive systems at the perimeter or exterior.

(e) The system should control all gas producing areas except those that are excluded because either (1) they are segregated and shown to contain asbestos or non-degradable material, (documentation must include nature, location, amount of asbestos or non-degradable material deposited, and date of deposition) or (2) they are nonproductive areas and can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill (amount, location, and age of the material must be documented).

(f) The gas extraction components must be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion-resistant material.

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(g) The extraction components must be of suitable dimensions to: convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads.

(h) The collection system must be capable of any expansion needed to comply with emission and migration standards.

(i) 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 to prevent excessive air infiltration.
(j) Vertical wells cannot endanger underlying liners and must address the occurrence of water within the landfill.

(k) Holes and trenches must be of sufficient cross-section for proper construction and completion. For example: the design should call for the centering of pipes and allow for the placement of gravel backfill.

(l) Collection devices must be constructed of PVC, HDPE pipe, fiberglass, stainless steel, or other nonporous corrosionresistant material and must not allow for air intrusion into the cover, refuse into the collection system, or landfill gas into the atmosphere.

(m) Any gravel used around the pipe perforations should be large enough to prevent penetration or blockage of the perforations.

(n) The connections for collection devices may be above or below ground, but must include: a positive closing throttle valve, necessary seals and couplings, access couplings, and at least one sampling port.

(o) The system must convey the landfill gas to a control system through the collection header pipe

(p) The maximum flow rate must be determined by existing flow data, or by alternative landfill gas estimation model preapproved by PADEP, or by using the following equation:

$$QM = \sum_{i=1} S\ 2\ k\ Lo\ Mi\ (ekti)$$

where,
QM = maximum expected gas generation flow rate, m3/yr
k = methane generation rate constant, year 1
Lo = methane generation potential, m3/Mg solid waste
Mi = mass of solid waste in the ith section, Mg
ti = age of the ith section, years

(s) The gas mover equipment must be of a size capable of handing the maximum gas generation flow rate expected over the intended use period of the equipment.

 # 037 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

(a) In order to prevent offsite migration of landfill gas, the gas collection system shall be designed to collect gas from the maximum possible area of the landfill and to accommodate the maximum gas generation rate of the landfill.

(b) The collection system shall be operated and maintained to ensure that the gas collection rate is no less than the gas generation rate. In order to assure compliance with this requirement, no positive pressure shall be measurable at the wells. Each well shall be equipped with a throttling valve to enable adjustment of the gas collection rate, if necessary.

(c) There shall be no landfill gas leaks which result in concentrations of 500 ppmv or more measured as propane (or 1375 ppmv or more measured as methane) at a distance of 0.5 inches from any equipment which includes gas wells, piping or any other connections or fittings along the landfill gas transfer paths of a landfill gas collection system, energy recovery, gas purification and/or any other disposal system. Non repeatable and momentary readings shall not be considered.

 # 038 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.762]

Subpart XXX - Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014

Standards for air emissions from municipal solid waste landfills.

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(a) Each owner or operator of an MSW landfill having a design capacity less than 2.5 million megagrams by mass or 2.5 million cubic meters by volume must submit an initial design capacity report to the Administrator as provided in § 60.767(a). The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. Any density conversions must be documented and submitted with the report. Submittal of the initial design capacity report fulfills the requirements of this subpart except as provided for in paragraphs (a)(1) and (2) of this section.

(1) The owner or operator must submit to the Administrator an amended design capacity report, as provided for in § 60.767(a)(3).

(2) When an increase in the maximum design capacity of a landfill exempted from the provisions of §§ 60.762(b) through 60.769 on the basis of the design capacity exemption in paragraph (a) of this section results in a revised maximum design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, the owner or operator must comply with the provisions of paragraph (b) of this section.

(b) Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, must either comply with paragraph (b)(2) of this section or calculate an NMOC emission rate for the landfill using the procedures specified in § 60.764. The NMOC emission rate must be recalculated annually, except as provided in § 60.767(b)(1)(ii). The owner or operator of an MSW landfill subject to this subpart with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters is subject to part 70 or 71 permitting requirements.

(1) If the calculated NMOC emission rate is less than 34 megagrams per year, the owner or operator must:

(i) Submit an annual NMOC emission rate emission report to the Administrator, except as provided for in § 60.767(b)(1)(ii); and

(ii) Recalculate the NMOC emission rate annually using the procedures specified in § 60.764(a)(1) until such time as the calculated NMOC emission rate is equal to or greater than 34 megagrams per year, or the landfill is closed.

(A) If the calculated NMOC emission rate, upon initial calculation or annual recalculation required in paragraph (b) of this section, is equal to or greater than 34 megagrams per year, the owner or operator must either: Comply with paragraph (b)(2) of this section; calculate NMOC emissions using the next higher tier in § 60.764; or conduct a surface emission monitoring demonstration using the procedures specified in § 60.764(a)(6).

(B) If the landfill is permanently closed, a closure report must be submitted to the Administrator as provided for in § 60.767(e).

(2) If the calculated NMOC emission rate is equal to or greater than 34 megagrams per year using Tier 1, 2, or 3 procedures, the owner or operator must either:

(i) Calculated NMOC Emission Rate. Submit a collection and control system design plan prepared by a professional engineer to the Administrator within 1 year as specified in § 60.767(c); calculate NMOC emissions using the next higher tier in § 60.764; or conduct a surface emission monitoring demonstration using the procedures specified in § 60.764(a)(6). The collection and control system must meet the requirements in paragraphs (b)(2)(ii) and (iii) of this section.

(ii)Collection system. Install and start up a collection and control system that captures the gas generated within the landfill as required by paragraphs (b)(2)(ii)(C) or (D) and (b)(2)(iii) of this section within 30 months after:

(A) The first annual report in which the NMOC emission rate equals or exceeds 34 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the NMOC emission rate is less than 34 megagrams per year, as specified in § 60.767(c)(4); or

(B) The most recent NMOC emission rate report in which the NMOC emission rate equals or exceeds 34 megagrams per year based on Tier 2, if the Tier 4 surface emissions monitoring shows a surface methane emission concentration of 500 parts per million methane or greater as specified in § 60.767(c)(4)(iii).

(C) An active collection system must:

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(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 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 5 years or more if active; or 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.

(D) A passive collection system must:

(1) Comply with the provisions specified in paragraphs (b)(2)(ii)(C)(1), (2), and (3) of this section.

(2) Be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners must be installed as required under 40 CFR 258.40.

(iii)Control system. Route all the collected gas to a control system that complies with the requirements in either paragraph (b)(2)(iii)(A), (B), or (C) of this section.

(A) A non-enclosed flare designed and operated in accordance with the parameters established in § 60.18 except as noted in § 60.764(e); or

(B) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The reduction efficiency or parts per million by volume must be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in § 60.764(d). The performance test is not required for boilers and process heaters with design heat input capacities equal to or greater than 44 megawatts that burn landfill gas for compliance with this subpart.

(1) If a boiler or process heater is used as the control device, the landfill gas stream must be introduced into the flame zone.

(2) The control device must be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in § 60.766;

(C) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or beneficial use such as fuel for combustion, 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 either paragraph (b)(2)(iii)(A) or (B) of this section.

(D) All emissions from any atmospheric vent from the gas treatment system are subject to the requirements of paragraph (b)(2)(iii)(A) or (B) of this section. For purposes of this subpart, atmospheric vents located on the condensate storage tank are not part of the treatment system and are exempt from the requirements of paragraph (b)(2)(iii)(A) or (B) of this section.

(iv)Operation. Operate the collection and control device installed to comply with this subpart in accordance with the provisions of §§ 60.763, 60.765 and 60.766.

(v)Removal criteria. The collection and control system may be capped, removed, or decommissioned if the following criteria are met:

(A) The landfill is a closed landfill (as defined in § 60.761). A closure report must be submitted to the Administrator as provided in § 60.767(e).

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(B) The collection and control system has been in operation a minimum of 15 years or the landfill owner or operator demonstrates that the GCCS will be unable to operate for 15 years due to declining gas flow.

(C) Following the procedures specified in § 60.764(b), the calculated NMOC emission rate at the landfill is less than 34 megagrams per year on three successive test dates. The test dates must be no less than 90 days apart, and no more than 180 days apart.

(c) For purposes of obtaining an operating permit under title V of the Clean Air Act, the owner or operator of an MSW landfill subject to this subpart with a design capacity less than 2.5 million megagrams or 2.5 million cubic meters is not subject to the requirement to obtain an operating permit for the landfill under part 70 or 71 of this chapter, unless the landfill is otherwise subject to either part 70 or 71. For purposes of submitting a timely application for an operating permit under part 70 or 71, the owner or operator of an MSW landfill subject to this subpart with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters, and not otherwise subject to either part 70 or 71, becomes subject to the requirements of § 70.5(a)(1)(i) or § 71.5(a)(1)(i) of this chapter, regardless of when the design capacity report is actually submitted, no later than:

(1) November 28, 2016 for MSW landfills that commenced construction, modification, or reconstruction after July 17, 2014 but before August 29, 2016;

(2) Ninety days after the date of commenced construction, modification, or reconstruction for MSW landfills that commence construction, modification, or reconstruction after August 29, 2016.

(d) When an MSW landfill subject to this subpart is closed as defined in this subpart, the owner or operator is no longer subject to the requirement to maintain an operating permit under part 70 or 71 of this chapter for the landfill if the landfill is not otherwise subject to the requirements of either part 70 or 71 and if either of the following conditions are met:

(1) The landfill was never subject to the requirement for a control system under paragraph (b)(2) of this section; or

(2) The owner or operator meets the conditions for control system removal specified in paragraph (b)(2)(v) of this section.

 # 039 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.763]

Subpart XXX - Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014

Operational standards for collection and control systems.

Each owner or operator of an MSW landfill with a gas collection and control system used to comply with the provisions of § 60.762(b)(2) 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 owner or operator must record instances when positive pressure occurs in efforts to avoid a fire. These records must be submitted with the annual reports as provided in § 60.767(g)(1);

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

(3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes must be approved by the Administrator as specified in § 60.767(c);

(c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55 degrees Celsius

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(131 degrees Fahrenheit). The owner or operator may establish a higher operating temperature value at a particular well. A higher operating value demonstration must be submitted to the Administrator 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).

(d) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator must conduct surface testing using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in § 60.765(d). The owner or operator 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 and all cover penetrations. Thus, the owner or operator must monitor any openings that are within an area of the landfill where waste has been placed and a gas collection system is required. The owner or operator 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.

(e) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with § 60.762(b)(2)(iii). In the event the collection or control system is not operating, 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

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

(g) If monitoring demonstrates that the operational requirements in paragraphs (b), (c), or (d) of this section are not met, corrective action must be taken as specified in § 60.765(a)(3) and (5) or (c). If corrective actions are taken as specified in § 60.765, the monitored exceedance is not a violation of the operational requirements in this section.

 # 040 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.765]

Subpart XXX - Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014

Compliance provisions.

(a) Except as provided in § 60.767(c)(2), the specified methods in paragraphs (a)(1) through (6) of this section must be used to determine whether the gas collection system is in compliance with § 60.762(b)(2)(ii).

(1) For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with § 60.762(b)(2)(ii)(C)(1), either Equation 5 or Equation 6 must be used. The methane generation rate constant (k) and methane generation potential (Lo) kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42) or other site specific values demonstrated to be appropriate and approved by the Administrator. If k has been determined as specified in § 60.764(a)(4), 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.

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

Refer to regulation 40 CFR Part 60, Subpart XXX, § 60.765 a(1)(i) for formula.

Where:

Qm = Maximum expected gas generation flow rate, cubic meters per year.

Lo = Methane generation potential, cubic meters per megagram solid waste.

R = Average annual acceptance rate, megagrams per year.

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k = Methane generation rate constant, year-1.

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

c = Time since closure, years (for an active landfill c = 0 and e-kc = 1).

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

Refer to regulation 40 CFR Part 60, Subpart XXX, § 60.765 a(1)(ii) for formula.

Where:

QM = Maximum expected gas generation flow rate, cubic meters per year.

k = Methane generation rate constant, year-1.

Lo = Methane generation potential, cubic meters per megagram solid waste.

Mi = Mass of solid waste in the i th section, megagrams.

ti = Age of the i th section, years.

(iii) If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, Equation 5 or Equation 6 in paragraphs (a)(1)(i) and (ii) of this section. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using Equation 5 or Equation 6 in paragraphs (a)(1)(i) or (ii) of this section 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.

(2) For the purposes of determining sufficient density of gas collectors for compliance with § 60.762(b)(2)(ii)(C)(2), the owner or operator must design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Administrator, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

(3) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with § 60.762(b)(2)(ii)(C)(3), the owner or operator must measure gauge pressure in the gas collection header applied to each individual well, monthly. If a positive pressure exists, action must be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under § 60.763(b). Any attempted corrective measure must not cause exceedances of other operational or performance standards.

(i) If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement of positive pressure, the owner or operator 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 owner or operator must keep records according to § 60.768(e)(3).

(ii) If corrective actions cannot be fully implemented within 60 days following the positive pressure measurement for which the root cause analysis was required, the owner or operator 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 owner or operator must submit the items listed in § 60.767(g)(7) as part of the next annual report. The owner or operator must keep records according to § 60.768(e)(4).

(iii) If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator, according to § 60.767(g)(7) and § 60.767(j). The owner or operator must keep records according to § 60.768(e)(5).

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(4) [Reserved]

(5) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator must monitor each well monthly for temperature as provided in § 60.763(c). If a well exceeds the operating parameter for temperature, 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.

(i) If a landfill gas temperature less than 55 degrees Celsius (131 degrees Fahrenheit) cannot be achieved within 15 calendar days of the first measurement of landfill gas temperature greater than 55 degrees Celsius (131 degrees Fahrenheit), the owner or operator 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 55 degrees Celsius (131 degrees Fahrenheit) was first measured. The owner or operator must keep records according to § 60.768(e)(3).

(ii) If corrective actions cannot be fully implemented within 60 days following the positive pressure measurement for which the root cause analysis was required, the owner or operator 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 55 degrees Celsius (131 degrees Fahrenheit). The owner or operator must submit the items listed in § 60.767(g)(7) as part of the next annual report. The owner or operator must keep records according to § 60.768(e)(4).

(iii) If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator, according to § 60.767(g)(7) and § 60.767(j). The owner or operator must keep records according to § 60.768(e)(5).

(6) An owner or operator seeking to demonstrate compliance with § 60.762(b)(2)(ii)(C)(4) through the use of a collection system not conforming to the specifications provided in § 60.769 must provide information satisfactory to the Administrator as specified in § 60.767(c)(3) demonstrating that off-site migration is being controlled.

(b) For purposes of compliance with § 60.763(a), each owner or operator of a controlled landfill must place each well or design component as specified in the approved design plan as provided in § 60.767(c). Each well must be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of:

(1) Five (5) years or more if active; or

(2) Two (2) years or more if closed or at final grade.

(c) The following procedures must be used for compliance with the surface methane operational standard as provided in § 60.763(d).

(1) After installation and startup of the gas collection system, the owner or operator 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 paragraph (d) of this section.

(2) 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.

(3) Surface emission monitoring must be performed in accordance with section 8.3.1 of Method 21 of appendix A of this part, except that the probe inlet must be placed within 5 to 10 centimeters of the ground. Monitoring must be performed during typical meteorological conditions.

(4) 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 (c)(4)(i) through (v) of this section must be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of § 60.763(d).

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

(ii)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 calendar days of detecting the exceedance.

(iii) If the re-monitoring of the location shows a second exceedance, additional corrective action must 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 (c)(4)(v) of this section must be taken, and no further monitoring of that location is required until the action specified in paragraph (c)(4)(v) of this section has been taken.

(iv) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in paragraph (c)(4)(ii) or (iii) of this section must 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 (c)(4)(iii) or (v) of this section must be taken.

(v) For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device 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 Administrator for approval.

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

(d) Each owner or operator seeking to comply with the provisions in paragraph (c) of this section or § 60.764(a)(6) must comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

(1) The portable analyzer must meet the instrument specifications provided in section 6 of Method 21 of appendix A of this part, except that “methane” replaces all references to “VOC”.

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

(3) To meet the performance evaluation requirements in section 8.1 of Method 21 of appendix A of this part, the instrument evaluation procedures of section 8.1 of Method 21 of appendix A of this part must be used.

(4) The calibration procedures provided in sections 8 and 10 of Method 21 of appendix A of this part must be followed immediately before commencing a surface monitoring survey.

(e) The provisions of this subpart apply at all times, including periods of startup, shutdown or malfunction. During periods of startup, shutdown, and malfunction, you must comply with the work practice specified in § 60.763(e) in lieu of the compliance provisions in § 60.765.

 # 041 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.769]

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Specifications for active collection systems.

(a) Each owner or operator seeking to comply with § 60.762(b)(2)(i) must site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the Administrator as provided in § 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

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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) of this section 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) of this section must control all gas producing areas, except as provided by paragraphs (a)(3)(i) and (ii) of this section.

(i) Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under § 60.768(d). The documentation must provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area, and must be provided to the Administrator upon request.

(ii) Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material must be documented and provided to the Administrator 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.

(A) The NMOC emissions from each section proposed for exclusion must be computed using Equation 7:

Refer to regulation 40 CFR Part 60, Subpart XXX, § 60.769 a(3)(ii)(A) for formula. Eq.7.

Where:

Qi = NMOC emission rate from the i th section, megagrams per year.

k = Methane generation rate constant, year-1.

Lo = Methane generation potential, cubic meters per megagram solid waste.

Mi = Mass of the degradable solid waste in the i th section, megagram.

ti = Age of the solid waste in the i th section, years.

CNMOC = Concentration of nonmethane organic compounds, parts per million by volume.

3.6 × 10-9 = Conversion factor.

(B) If the owner/operator is proposing to exclude, or cease gas collection and control from, nonproductive physically separated (e.g., separately lined) closed areas that already have gas collection systems, NMOC emissions from each physically separated closed area must be computed using either Equation 3 in § 60.764(b) or Equation 7 in paragraph (a)(3)(ii)(A) of this section.

(iii) The values for k and CNMOC 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, Lo and CNMOC provided in § 60.764(a)(1) or the alternative values from § 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)(3)(i) of this section.

(b) Each owner or operator seeking to comply with § 60.762(b)(2)(ii)(A) 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

SECTION E. Source Group Plan Approval Restrictions.

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) Each owner or operator seeking to comply with § 60.762(b)(2)(iii) must convey the landfill gas to a control system in compliance with § 60.762(b)(2)(iii) 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 (c)(2) of this section must be used.

(2) For new collection systems, the maximum flow rate must be in accordance with § 60.765(a)(1).

 # 042 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1955]

Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills

What requirements must I meet?

(a) During a period of startup, shutdown, or malfunction, the general duty to minimize emissions requires that the owner or operator reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the permittee to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved.

(b) Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan pursuant to 40 C.F.R.Sec.63.6(e)(3). To the extent that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices.

VII. ADDITIONAL REQUIREMENTS.

 # 043 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The provisions of 40 C.F.R. Part 60, Subpart XXX set forth in this permit shall apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of any period of start-up, shutdown or malfunction shall not exceed 5 days for the gas collection system and not exceed 1 hour for the enclosed flare. The malfunction exemption is only applicable for determination of compliance with 40 C.F.R. Part 60 Subpart XXX.

 # 044 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

Source ID 106 subject to 40 CFR Part 60 Standards of Performance for New Stationary Sources, Subpart XXX, Municipal Solid Waste Landfills.

SECTION F. Alternative Operation Requirements.

No Alternative Operations exist for this Plan Approval facility.

SECTION G. Emission Restriction Summary.

No emission restrictions listed in this section of the permit.

SECTION H. Miscellaneous.

****** End of Report ******